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Social and/or Educational Aspects of Pierre Schaeffer's *Musique Concrète*
(on the utopian fate of music as a project)

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The specific notion of "concreteness" (as opposed to "abstractness") in Pierre Schaeffer's *musique concrète* requires revalorization of the whole notion of music. If we want to discuss the consequences of *musique concrète*, the "concreteness" of sound material does not suffice. For Schaeffer, the concreteness of the sound is just the **sound heard** from which one has to extract the musical values. Therefore, both "concrete" and "abstract" are for him "two isotopes of reality". The main goal of Schaeffer's "solfège (expérimental) concret", with typology, morphology, characterology, analysis and synthesis as its "disciplines", is the educational preparation for the "sound objects" to become "musical objects", because the aspect of concreteness cannot be left at the level of its mere "naturalness". "Solfège des objets musicaux" is therefore the most important **project** in Schaeffer's theory which should compensate the regulative role of scale system in traditional ("abstract") music, but - of course - far away from any normative unambiguousness, which seems to be impossible for music whose theoretical concepts strive for the further development of musical experience, of listening, and of musical praxis in general. Schaeffer's *musique concrète* is therefore a utopian concept, the reality of which is highly dependent on elaboration through appropriate educational methods which are the conditional part of Schaeffer's theory as project.

Die spezifische Auffassung vom "Konkreten" (im Gegensatz zum "Abstrakten") in Pierre Schaeffers *musique concrète* verlangt die Neuwertung der herkömmlichen Auffassung von Musik. Wenn wir die Folgen, die von der *musique concrète* ausgehen, erörtern wollen, genügt dafür nur der **konkrete** Zustand des Klangmaterials nicht. Für Schaeffer ist das Konkrete des Klanges einfach **irgendein gehörter Klang**, vom welchen die musikalischen Werte abgeleitet werden müssen. Damit sind für Schaeffer das Konkrete und das Abstrakte "zwei Isotopen des Realen". Das Ziel von Schaeffers "solfège (expérimental) concret", mit Typologie, Morphologie, Charakterologie, Analyse und Synthese als seine "Disziplinen", ist die erzieherische Vorbereitung auf die Umwandlung von "Klangobjekten" zu "Musikobjekten", da der konkrete Aspekt nicht auf dem Niveau seiner blossen Naturalität gelassen werden kann. Das "Solfège des objets musicaux" ist deswegen das wichtigste **Projekt** in der Theorie Schaeffers, das die regulative Rolle des Systems der Leiter in der traditionellen ("abstrakten") Musik einigermaßen ersetzen sollte. Selbstverständlich ist so eine normative Rolle in der *musique concrète* unvorstellbar, weil sie die weitere Entwicklung von musikalischer Erfahrung, vom Hören und von der musikalischen Praxis überhaupt erstrebt. Schaeffers *musique concrète* ist eine utopische Auffassung, deren reales Bestehen von den entsprechenden erzieherischen Methoden abhängig ist.

"Le cas de la musique concrète recèle... un curieux paradoxe. Si elle conservait aux bruits leur valeur représentative, elle disposerait d'une première articulation qui lui permettrait d'instaurer un système de signes par l'intervention d'une seconde. Mais, avec ce système, on ne dirait presque rien. Pour s'en convaincre, il suffit d'imaginer le genre d'histoires qu'on pourrait raconter avec des bruits, en restant raisonnablement assuré qu'elles seraient tout à la fois comprises et émouvantes. D'où la solution adoptée, de dénaturer les bruits pour en faire des pseudo-sons; mais entre lesquels il est alors impossible de définir des rapports simples, formant un système déjà significatif sur un autre plan, et capable de fournir la base d'une deuxième articulation. La musique concrète a beau se griser de l'illusion qu'elle parle: elle ne fait que patauger à côté du sens". (Lévi-Strauss 1964: 31)

"... une oeuvre électro-acoustique relève d'un projet à la fois technique et intellectuel. Pour composer, il faut se salir les mains dans un studio; pour 'écrire' une oeuvre qui se tienne, il faut des schémas de composition." (Nattiez 1987: 125)

I.1 Musically concrete, musically abstract - in general!

In most classifications of music we can rarely find the conceptual pair concrete music/abstract music. Due to the specific character of musical meaning, which derives from the fact that music is only similar to language - not a language itself - music should primarily be considered **abstract**, expressing its immanent content without creating "a system of signs" in the sense of language (Adorno 1978: 251). However, in late nineteenth century the French theoretician Anatole Loquin made a distinction between "musique abstraite" - i.e., notated music - and "musique concrète" - i.e., music that one hears (Groth 1983: 66). According to Abraham Moles (1960: 32) in his "théâtre de la cruauté" Antonin Artaud required a new music which had to be perceived directly - "*concrètement*" - by the sensibility of the spectator.¹

I.2 "Musique concrète" and "musique abstraite" in Schaeffer's theory

Loquin's relation between abstraction and notation is similar to Schaeffer's concept of "musique abstraite". In 1948, in the first definition of *musique concrète* (quoted in Chion 1991: 12), Schaeffer explains the "abstraction" of "habitual music" [*musique habituelle*] by stating that it is first imagined by the spirit [*conçue par l'esprit*], then theoretically notated [*notée théoretiquement*], and finally realized in instrumental performance [*réalisée dans une exécution instrumentale*]. On the other hand, music is called "concrète" when it is made from elements which have existed before as any sound material, including noise and "musique habituelle", and then composed experimentally through direct construction [*composée expérimentalement par une construction directe*], in other words, **without** notational mediation (ibid.). Schaeffer's idea of "concreteness" is therefore not only based on the character of the material, but also on the compositional procedures that were used to elaborate that material. Furthermore, "concreteness" as a characteristic is not necessarily limited to "natural sound" only (exposed to experimentation in the process of **direct** composing), as Schaeffer clearly stated that it can also be a feature of "musique habituelle" itself. Let us compare two authoritative definitions of *musique concrète* to elucidate more precisely this essential notion of "concreteness":

1) "Musique concrète does not owe its name to the aesthetic goal which it follows, but to the generally concrete origin of the sounds used." [*La musique concrète doit son appellation non pas au but esthétique poursuivi, mais à l'origine, généralement concrète, en effet, des sons utilisés.*] (Rostand 1970: 62a)

2) "It (the name *musique concrète*, N.G.) was intended to denote both... use of natural, or 'concrete', sound sources and their manner of composing 'concretely' on tape rather than 'abstractly' through notation and performance." (Howe 1980: 107b)

¹ M. Beiche (1995: 271a) claims that both of these usages (Loquin's and Artaud's) have not been verified thus far.

Both definitions are in fact deficient: the first one because it does not take into consideration the experimental elaboration of "concrete" sound material; the second one because, although it takes care of "concrete" composing, it somehow represents a limited concept of (sound) material.

Therefore, it is obvious that "concrete" material cannot be the sole determinant of *musique concrète*. Schaeffer (1977³: 629) even undeniably requires the construction according to the logic of material, so that the sense can be found in the internal proportions of a work, similar to architecture: the object becomes the material with essential psychological proprieties. Otherwise the raw material, with no concern of its inner logic, which should guide its elaboration, would simply be left at the level of recognizable (onomatopoetic) signification, in the best case as the source of a kind of literal "musique descriptive" or banal "Tonmalerei". It is easy to conclude that the relation between the concrete material and its abstract musical relevance cannot be defined by separating them by strict boundaries, without their intermingling. According to Schaeffer, "abstract" and "concrete" remain in a relation of reciprocal influence. The floating boundaries between them throw specific light on the idea of concreteness and abstractness in music in general.

"Abstrait" and "concret" are two "'isotopes' of reality" [*'isotopes' du réel*] (Schaeffer 1977³: 24). They are two faces of perception in general which in music have to be put in balance against the "excesses of the *concrete* (in 'wild' *musique concrète*) or the excesses of the *abstract* (in any music 'a priori', serial or other)" [*les excès de concret (dans la musique concrète 'sauvage') ou les excès d'abstrait (dans les musiques 'a priori', sérielles ou autres)*] (Chion 1983: 39). For Schaeffer "sound concreteness" [*concret sonore*] represents the "sound heard" [*son entendu*] from which one has to "abstract" musical values (ibid.). In 1957 Schaeffer abandoned the expression *musique concrète* because of its ambiguity, preferring "experimental music" [*musique expérimentale*] instead. Experimentation in this music should follow "musical research starting from the concrete,... but (be) completely dedicated to reconquering the indispensable abstractness of music" [*la recherche musicale à partir du concret,... mais tout entière vouée à la reconquête de l'indispensable abstrait musical*] (Schaeffer 1977³: 24). It should thus allow "an abstract musical organization of objects, beginning with their concrete qualities" [*une organisation musicale abstraite des objets à partir de leurs qualités concrètes*] (Chion 1983: 72).

The musicality of traditional art music corresponds to the *abstract* aspect of a musical work, written and fixed in the score. Its sonority corresponds to its *concrete* realization, which can vary in every performance. In Schaeffer's experimental research of new music, anything connected with the sound [*le sonore*] means "the jungle of all possible sounds, still without any musical function" [*la jungle de tous les sons possibles, encore sans fonction musicale*]. From this "jungle" one has to choose and extract such "sound objects" [*objets sonores*] which are in certain contexts appropriate [*convenables*] to become "musical objects" [*objets musicaux*] (Chion 1983: 68). In "solfège expérimental", which has five stages, the first three stages ("typologie", "morphologie", and "caractérologie") have to identify and describe "le sonore", while the two following stages ("analyse" and "synthèse") govern the passage from sound to music" [*le passage du sonore au musical*] (Chion 1983: 105).

The "rational" stages of Schaeffer's *sofège*, which educationally prepare "objets sonores" to become "objets musicaux", have to be framed into his elaboration of the "functions of listening" [*fonctions de l'écoute*] as hearing/listening is the ultimate criterion of finding an appropriate musical "abstractness" in the "concreteness" of the sound material.¹ Schaeffer (1977³: 113) distinguishes between four kinds of listening, each divided into four sectors through which the perception passes in all directions, often using them simultaneously: 1. "listening" [*écouter*], 2. "noticing with the ear" [*ouïr*], 3. "hearing" [*entendre*], and 4. "understanding" [*comprendre*]. In the terminology of Schaeffer's theory these ordinary French words have special meanings which are exactly defined by Chion (1983: 25): **Écouter** comprises the listening that looks after the source of sound, after its cause. **Ouïr** means to perceive by ear at the rawest, elementary level of perception; in this way we passively hear many things which we pretend neither to listen to nor to understand. **Entendre** means intentional listening, the selection of the most interesting material out of everything that we hear without intention ("ouïr"); we have to sort out what we hear in this way. **Comprendre** means to grasp the sense, the values; the sound is thus treated as something which directs us to this sense, which functions like a language or code (semantic listening). Schaeffer has qualified these four sectors either as "*objectif*"/"*subjectif*" or as "*concret*"/"*abstrait*": "**objectif**" (sectors 1 and 4) because one turns one's attention to the **object** of perception, "**subjectif**" (sectors 2 and 3) because one turns one's attention towards the perceiving **subject**; "**concret**" (sectors 1 and 2) because the causal references in sector 1 and the raw sonority in sector 2 represent inexhaustible concreteness; "**abstrait**" (sectors 3 and 4) because the object is "peeled off" to identify the qualities which serve to qualify its perception (sector 3), or to constitute a language which is able to express sense (sector 4) (Chion 1983: 26). In identifying the dichotomies "objectif"/"subjectif" and "concret"/"abstrait" Schaeffer has attained the broader sense of the pair "concret"/"abstrait": it is still conditioned by the sound material, but in such a way that it properly influences the ways of perception which, on their way to the (musical) sense, have to take care about the properties of material. His initial presentation of the functions of listening is given in tabular form (Schaeffer 1977³: 116) and is elaborated later on with further branches: such as "the correlation between physical objects, sound objects, and musical objects" [*corrélation entre objet physique, objet sonore et objet musical*] (Schaeffer 1977³: 144), "the final result of listening intentions" [*bilan final des intentions d'écoute*] (Schaeffer 1977³: 154), "a comparative table of language materials and musical materials" [*tableau comparatif des matériaux du langage et de la musique*] (Schaeffer 1977³: 314), "the musicality - sonority relationship (traditional system)" [*bilan musicalité-sonorité (système traditionnel)*] etc. (Schaeffer 1977³: 320). Although we cannot deal with all these branches of the dichotomies in detail, they can give us some ideas about the latitude of Schaeffer's

¹ "Les limites du musicien, donc de la musique, ont longtemps été en effet du côté du *faire* musical: limites d'une lutherie, d'une virtuosité. En annihilant ou en tournant celles-ci, les techniques électro-acoustiques actuelles ont démasqué les bornes de l'*entendre* musical: notre oreille apparaissait soudain comme l'origine première de toute appréciation musicale, en même temps que comme un *appareil* à *entendre* soumis à des normes physiques précises." (Schaeffer 1977³: 203)

concepts. But we shall return to Schaeffer's listening strategies later on, because we have to discuss them within the framework of yet another dichotomy: "natural"/"cultural".

II. Further dichotomy: "concret"/"abstrait" = "naturel"/"culturel"

Music is, according to Schaeffer, both "natural" [*naturelle*] and "cultural" [*culturelle*]. This means that there should be a minimum of "natural laws" [*lois naturelles*] that must be respected by a musical system in order to be viable, e.g. perceptible. But through two additional dichotomies - "doing" [*faire*]/"hearing" [*entendre*] and "abstract" [*abstrait*]/"concrete" [*concret*] - it is not only divided into "natural" and "cultural", but is "triple dual" [*triplement duelle*] (Chion 1983: 36). Trying to compare the dichotomy "musique concrète/abstraite" with "figurative/non-figurative (abstract) painting" [*peinture figurative/non figurative (abstraite)*], Schaeffer points out that models from the external world are apt for figurative painting, while abstract, non-figurative painting relies upon pictorial values of an inevitably **abstract** quality. As the external world is a *natural* one, these values are therefore norms elaborated amid a determined *cultural* collective [*au sein d'une collectivité culturelle déterminée*]. Inversely, music is first of all elaborated without an external model, using only musical "values", which are **abstract**. And it becomes "concrete", or "figurative", when it uses "sound objects", derived directly from the external world of natural sounds and noises (Schaeffer 1977³: 23; cf. also Lévi-Strauss 1964: 26-31; Nattiez 1973: 60-61; Karbusicky 1990: 187). Of course, the natural sounds and noises from the external world are here the oversimplified sources of "concreteness". And Schaeffer is aware of that! The abstract values that are elaborated according to the norms established by the cultural collective presuppose the change of "sound objects" into "musical objects" according to the cultural context and the intention of the listening subject (Schaeffer 1968: 283). So the "concreteness" of natural sounds and noises does not automatically comprise its "naturalness". Since no sound material can be good for making all music, because a "sound object" must be appropriate [*convenable*] to become a "musical object" (Chion 1983: 97), the "musical object" is in fact none other than an appropriate "sound object" [... *l'Objet Musical n'est qu'un Objet Sonore convenable*] (Chion 1983: 12) How? Through appropriate listening, says Schaeffer, "... we listen to sound objects with a musical ear, we give ourselves the appropriate sound objects, we consequently shape them, we extract them from their natural contexts: *the musician's invention* rises from artistic creation." [... *nous allons écouter les objets sonores d'une oreille musicale, nous donner des objets sonores convenables, les façonner en conséquence, les extraire de leurs contextes naturels: c'est l'invention musicale, qui relève de la création artistique*] (Schaeffer 1977³: 358)

This matter, however, is much more complicated than we can suppose! The relation between "natural" and "cultural" (and thus between "concreteness" and "abstractness") is obviously not an oppositional but a complementary one. There should be some traces of "cultural prediction" even in the rawest "natural concreteness" which make the "sound objects" appropriate for becoming "musical objects". The "natural part" of traditional music includes for example the perception of intervals and main harmonic degrees, consonant relations. Its "cultural part", however, is the choice of the scales, harmonic functions, etc.

They both form "structures of reference" [*structures de référence*] which vary according to cultures (Chion 1983: 36). Schaeffer makes a distinction between "natural structures of reference" [*structures de référence naturelles*] and "conventional structures of reference" [*structures de référence conventionnelles*]. The diatonic scale, for example, is preceded by three perfect superposed chords, and the Pythagorean scale is derived from a sequence of fifths. Both of them are thus constructed as prolongation of naturally given qualities, and using any of their degrees as the tonic of a mode is just a matter of choice, tradition, and conditioning [*conditionnement*]; therefore the scales themselves are not natural, but cultural. ([*Les échelles ne sont pas en elles-même 'naturelles' mais culturelles.*] - Chion 1983: 47) We thus move from some fundamental, **natural** elements to a completely separate order that is obviously **cultural**, developed through rigorous learning (Schaeffer 1977³: 609-610).

Such a step from the naturally fundamental to the culturally relevant is important in the process of composing - that is, in the making of music ("doing" [*faire*]). In Schaeffer's theory, however, "doing" always has to be complemented by "hearing" [*entendre*]. Let us see how this seemingly oppositional but in fact complementary relation between the "natural" and the "cultural" is reflected in hearing/listening.

At the first level Schaeffer distinguishes between "natural listening" [*écoute naturelle*] and "cultural listening" [*écoute culturelle*]: "Natural listening" is the primitive tendency to use sound in order to be informed about an event that is the cause of this sound (Schaeffer 1977³: 120). Therefore, it is placed in the first sector of listening ("écouter"). In "cultural listening" we turn from the sound event and its causes in order to find its message, signification, the values conveyed by this sound (Schaeffer 1977³: 121). Therefore, it belongs to the fourth sector of listening ("comprendre"). At the second level Schaeffer uses the pair "banal/specialized, practical listening" [*écoute banale/spécialisée, praticienne*], which directs us to the second and third sectors (Schaeffer 1977³: 121-122). This, however, is less important for us, especially if we compare it with the third level, where Schaeffer further elaborates the "natural/cultural listening" dichotomy: "Direct listening" [*écoute directe*] corresponds to "natural listening" with visible sound sources. It is thus opposed to "acousmatic listening" [*écoute acousmatique*], which does not look for the causes and the sources of the sound (event) (Chion 1983: 18). "Acousmatic listening" creates favorable conditions for another kind of listening, for "reduced listening" [*écoute réduite*], which consists of listening to the sound as it is, as a "sound object"¹, ignoring its origin or any sense which it could carry (Chion 1983: 33). "Acousmatic listening" requires new way of listening in order to find the way from "sound" [*sonore*] (nature) to "music" [*musical*] (culture) (Chion 1983: 19).

The listening strategies put into the framework of the dichotomy "natural"/"cultural" point out the importance of hearing/listening in Schaeffer's concept of *musique concrète*, throwing special light on the "sound object", which becomes a "musical object"; on

¹ "On appelle objet sonore tout phénomène et événement sonore perçu comme un ensemble, comme un tout cohérent, et entendu dans une *écoute réduite* qui le vise pour lui-même, indépendamment de sa provenance ou de sa signification." (Chion 1983: 34; cf. also Giomi-Ligabue 1992)

"sonority" [*sonorité*], which becomes "musicality" [*musicalité*]; on natural concreteness in general, which tends to become cultural abstractness as music. Of course, Schaeffer's "solfège expérimental" and "musical research program" [*programme de la recherche musicale*] (Schaeffer 1977³: 360-385, 475-597, passim.; Chion 1983: 90-94), already mentioned above, are necessary propaedeutic, pedagogical tools to achieve and realize these strategies.

III. *Musique concrète* from the semiotic point of view

We should mention three terms in Schaeffer's theory that could open a possible semiotic discourse: **Signal** is a sound in the sense of "physical signal", and it is researched in its physical parameters. **Index** [*indice*] is a sound which directs toward a cause, an event, a phonic agent [*agent phonique*]. In sector 1 of the functions of listening (Schaeffer 1977³: 116) it comprises the visibility of the sound source. However, **sign** [*signe*] has a double meaning:

1) A sound is listened to as a sign if it opens the way to the comprehension of a sense with reference to language [*language*], to a system of values. On the contrary, it is listened to as an index if we use it to recognize a cause, an agent, an event. Listening to a sound as a sign belongs to sector 4 of the functions of listening. The sense of this sound supposes "the emergence of a content of the sound, as well as *reference* to and *confrontation* with extrasonic notions" [*émergence d'un contenu du son et référence, confrontation à des notions extrasonores*] (ibid.).

2) In the analogy between language and music the musical "sign" is compared with the "linguistic sign" as defined by De Saussure: the association between the "signifier (acoustical image)" [*signifiant (image acoustique)*] and the "signified (concept)" [*signifié (concept)*] according to arbitrary relation. But contrary to the linguistic sign, the musical sign is not arbitrary. Its sense relies on the inner properties of the object, of the material (for example, of the musical note taken as a "sound object" - Schaeffer 1977³: 290, of the simple relations of fifth and octave, etc.), according to natural laws and to the structures of perception that can be called universal. The musical sign should not be confused with the notational sign, as it is made to be listened to, contrary to the linguistic sign (Schaeffer 1977³: 305). (The note is the smallest significative musical element, the one upon which everything is structured - Schaeffer 1977³: 281. But the note in notational fixation is a sign which exists prior to its realization - ibid.: 288.) The musical sign is also not identical to the "sound object", that is, its carrier. It is, however, identical to those values or pertinent traits that make possible the functioning of such a "sound object" in a musical structure, ignoring its other, non-pertinent properties (Schaeffer 1977³: 377; Chion 1983: 82).

It seems clear that Schaeffer's concept of sign gives a clear answer to the question of whether the sense of concrete "sound objects" could lie in their similarity with the meaning which they have as raw material in the external, natural world. Indeed, Schaeffer's *musique concrète* cannot therefore be a literal "musique descriptive" or a banal "Tonmalerei" because its "sound objects" matter only "musically", that is, according to those values or pertinent traits which place the "sound object" into a musical structure. Obviously, a sign

has to have sense: thus the sound which has to be understood in sector 4 of listening strategies ("*comprendre*") has to have sense; therefore it must be a sign. Although Schaeffer doubts whether music can be significative, he cannot deny that it has sense (Schaeffer 1977³: 377), even if this sense, in order to be understood, must account for the emergence of the sound content with extrasonic notions (Schaeffer 1977³: 116; s. above).

IV. Doubts about Schaeffer's theory

Schaeffer's theory can be only partially accepted as the explication of his compositional praxis. In the broader sense it represents the discourse between two opposed aesthetic schools, the one of "*musique a priori*" and the other one of "*musique expérimentale*" (Schaeffer 1977³: 23). It parts from the abstractness of traditional, habitual music, the one that exists *a priori*, approaches concreteness and sees in it other sources of abstractness. It is thus more or less conceived as **a project** that stipulates further thinking, not willing to offer any recipes according to which this project can end in the unquestionable abstractness of the music attained. This project polemicizes both with the traditional notion of abstractness and its exaggerated realizations, in the serial music of the fifties for example. As soon as the project remains open (to finish it would mean that it is not a project any more), it is exposed to comments and interpretations that either note its insufficiency as compared to the criteria of traditional music or misunderstand its openness. Let us cite some cases:

1) The well-known attack by Lévi-Strauss on *musique concrète* (Lévi-Strauss 1964: 31; cf. also Nattiez 1973: 61-62 and Eco 1972: 378-394) is based on the concreteness of natural sound material, which is not reduced to any system which could control its (cultural) sound qualities; therefore it cannot attain the level of language. Karbusicky (1990: 187; cf. also Eco 1971) considers this attack obsolete, which is in his opinion proved by the Fourth Book (*Objet et structures*) of Schaeffer's *Traité...* (s. Schaeffer 1977³: 259-385).

2) Dealing with the different roles of composers' theories, Lidov (1995: 22; bold N.G.) also elaborates Schaeffer's and comes to a conclusion which is extremely instructive for us: "The sound becomes significant only when one understands it as the result of its theory, that is, when one hears it as the product of systematic experimentation and manipulation of sounds discovered in the world. In that context it signifies **a project**; its allure entrains our imagination." First of all, as we mentioned before, Schaeffer avoids the term "signification", although he cannot deny that music has **sense** (Schaeffer 1977³: 377), which makes possible its understanding in sector 4 of listening strategies. Secondly, Lidov confuses theory with experimentation. In Schaeffer's "*musique expérimentale*" the "systematic experimentation and manipulation of sounds" are already present in the process of composing. However, the **project** is indeed the exercise with the auditive experience that has to be learned and practiced with the "*sofège des objets musicaux*". As we see, a clear ("traditional") division between theory and practice is almost impossible here.

3) The lack of normative regulations in the theory of *musique concrète* might be the cause of attacks because of the questionable means of sound control and organization of

sound material, although Schaeffer, as we mentioned before, clearly required compositional constructions according to the logic of the material itself (Schaeffer1977³: 629). Boulez (1966: 177) stated in 1952 that *musique concrète* evoked curiosity and appetite for "sound objects", not paying attention, however, to their organization. In 1958 he attacked the "material manipulation of sound" [*manipulation matérielle du sonore*] because "sound" [*sonore*] itself is not defined and restricted in any sense (Boulez 1966a: 285). In 1959, however, Messiaen praised the old *musique concrète* (which had by then become *recherches musicales*) because of the more methodical organization of work, of the usage of notation, and the lesser role of chance. The piece that confirms all these new qualities is Schaeffer's *Etude aux allures* (Messiaen 1959: 5). Such inconsistency does not need to wonder: The problem of organization emerges as a problem of a questionable system that does not define the tone qualities on the level of scale systems in traditional music as cultural reductions of the natural. Again: "Solfège des objets musicaux" (Schaeffer1977³: 475ff.), the most important **project** in Schaeffer's theory, should substitute the role of such a system - of course, far away from any normative unambiguousness, which seems to be impossible for music whose theoretical concepts strive for the further development of musical experience, of listening, and of musical praxis in general (cf. Frisius 1987: 55).

In the last chapter, written for the third re-edition of *Traité...* and entitled *À la recherche de la musique même*, Schaeffer (1977³: 663) contemplates on the faults and imperfections of his main work, claiming that it should be complemented with another *Traité*, *Traité des organisations musicales*, which should elaborate the combinations that give sense to the assembly of objects [*combinaisons qui donnent du sens aux assemblages d'objets*]. Obviously, this task could be more traditionally oriented, although still in a domain where everything has to be done. Thus we would still have a **project**!

V. Experimentation as a utopian perspective

We must admit that Schaeffer's *solfège expérimental* and *recherches musicales* account for the unpredictability of results and are therefore themselves **utopian**: their elaboration through any educational practice has to cope with conventional frameworks of musical education, and Schaeffer knows that these frameworks should - if not broken - then be enlarged in order to accept his goals.

Thanks to his elaborated theory of *musique concrète*, it seems that only this concept of musicality possesses such a broad educational aspect, no matter how utopian it is. This, however, is not quite true! We should mention some other attempts, although they do not explicitly mention *musique concrète* and might not even be considered as primarily educational programs:

1) The proposal of a *solfège* for new music by Hubert Haas and Erhard Karkoschka (1981) presents a pure educational program for acquiring the insight into the sound typology of new music through theoretical and practical exercises. However, all sound types cannot be covered by this typology, which is also proved by Helmut Lachenmann's (1996) proposed sound types, sketched in 1967 and first published in 1970.

2) R. Murray Schafer's attitude toward the sound environment, which is comprised in his concept of *soundscape* (cf. Schafer 1994), has also tempted an educational project, based on the analysis of the acoustical environment in which we find ourselves (cf. Schafer 1969).

3) John Cage (1961: 31-32) in one of his Darmstadt lectures (1958) exposes the concept of music as an "ideal" (not "real") situation, which may be considered as the prolongation of Schaeffer's concept of *musique concrète*, especially if we concentrate on the **second possibility** for the mind: "It becomes evident that music itself is an ideal situation, not a real one. The mind may be used either to ignore ambient sounds, pitches other than the eighty-eight, durations which are not counted, timbres which are unmusical or distasteful, and in general to control and understand an available experience. Or the mind may give up its desire to improve on creation and function as a faithful receiver of experience." In his well-known interview with Roger Reynolds (first published in 1962), Cage (1978: 341) comments on his view about the separation of composing, performing, and listening (cf. Cage 1961a: 15) in such a way that it is obvious that he strives after the specific emancipation of listening activity: "We normally think that the composer makes something, the performer is faithful to it, and that the business of the listener is to understand it. Yet the act of listening is clearly not the same as the act of performing, nor is either one of them the same as the act of composing... [W]hen [people] listen, they think that the composer, through the performer, has done something to them, forgetting that they are doing it themselves."

These three examples - even more: their unattainable scopes and goals - might, together with Schaeffer's theory of *musique concrète*, explicate the background of their utopianism. The question whether music can change human nature¹ might seem to be superfluous here; nevertheless, its relevance cannot be denied. Because "the most radical step done by *musique concrète* is its new determination of the relation between **the everyday auditive experience** and the specific experience of music". [*Die Neubestimmung des Verhältnisses zwischen der alltäglichen Hörerfahrung und der spezifischen Musikerfahrung ist wohl der radikalste Schritt, den die musique concrète vollzogen hat.*] (Frisius 1980: 135; bold by N.G.)

¹ Cage, for example, admits that music has changed him (Gligo 1974: 135).

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