John Dack : Pierre Schaeffer and the Significance of Radiophonic Art

Schaeffer and Radiophonic Art

The subject of this article is the contribution of radiophonic art to the development of Pierre Schaeffer's musical thought. By establishing the link between radiophonic art and Schaeffer's later musical developments I hope to clarify the status (and perhaps even the legitimacy) of anecdotal sounds in much electroacoustic music.

Historically, Schaeffer's position as the founder of musique concrète is unquestionable. Nevertheless, his position is often relegated to little more than a passing reference in books on contemporary music.Such a superficial account belies a more accurate description of the man as a prolific writer (both of fiction and on the mass media), music-theorist and composer. Schaeffer did not simply instigate a series of idiosyncratic incidents in early electroacoustic music as a colourful prelude to developments in other European centres. His ideas were entirely typical of a main current within French intellectual thought in the pre- and post-war years. Furthermore, these ideas were maintained consistently throughout his development and, I would suggest, are of continued relevance to much present-day electroacoustic music.

Schaeffer's later, purely musical, theories date from 1948 and address fundamental issues of musical communication. Timbre, the instrument, sound classification and description all figure in the many areas investigated and elaborated in works such as the Traité des Objets Musicaux (Schaeffer 1966). However, I believe that many of Schaeffer's early experiences in the radio medium - specifically in the practice of so-called radiophonic art - prefigure these later writings devoted to music theory. The conclusion must be that radiophonic art played a role of central importance in inspiring and consolidating Schaeffer's ideas. Consequently, his theories started to emerge earlier than the commonly accepted date of 1948. Such a revision emphasises from the very outset the distinct nature of Schaefferian notions from developments in other European centres. It is precisely because many criticisms of Schaeffer concentrate on his earliest experiments that a reassessment of their origins is needed. Misunderstanding and underestimating their unique characteristics hinders an appreciation of much French electroacoustic music and, more seriously, an entire methodology of subsequent musical thought and practice.

La Coquille à Planètes

That Schaeffer was influenced by the radio is in many ways hardly surprising - it was chosen profession. However, there is no necessary connection between the radio medium and music; many others have worked in radio without pursuing the same interests as Schaeffer. He described the medium with obvious enthusiasm calling it *"(...) this miracle-machine, this chamber of wonders."* (Schaeffer, 1970 p.89) He also referred to the "creative power of the machine" and stated his belief that machines used in producing radio programmes:

"(...) are not content to retransmit what was given to them, they have begun - as if of their own accord - to make something. I anthropomorphize a little, but let's say that accidents are creative." (Schaeffer, 1977 p.168)

During the mid nineteen-forties one of Schaeffer's concerns was radiophonic art which included all manner of sounds: words, music as well as noises. Due to the predominance of drama and the spoken word in radio productions, literary considerations were a decisive factor. Broadly speaking, therefore, radiophonic art could involve the creation of simple sound effects but also more complex accompaniments used to accentuate or comment on aspects of the dramatic action - a role that has continued to the present day. Although these areas seem to be principally an adjunct to drama productions Schaeffer's upbringing did in a sense prepare him for a unique conjunction of ideas. His parents were both musicians, he was born in the shadow of Nancy conservatoire, and, despite a cello diploma, did not choose music as a profession, thus, he later said: *"purging his Oedipus complex"* (Schaeffer, 1977 p.77). It is surely not too fanciful to speculate that these early musical experiences lay dormant, temporarily submerged beneath his literary and technical aspirations but ready to surface at an opportune moment.

One production in particular must be mentioned: La Coquille à Planètes. This so-called "radiophonic opera"

in eight one hour episodes was made at the Club d'Essai of the French Radio in Paris and broadcast in 1948. Apart from the music, which was composed by Claude Arrieu, Schaeffer did most of the work himself - the writing, the studio production and apparently even some of the acting. It is perhaps the first clear evidence of the manner in which Schaeffer's ideas were shaped by the radio medium. In his book 10 ans d'Essais Radiophoniques Schaeffer wrote that La Coquille à Planètes was an attempt to *"promote the acknowledgement of specifically radiophonic expression into every possible and imaginable domain."* (Schaeffer, 1989 p.30). He continued by claiming that the section called Aigles (eagles) contained passages where noise is combined with music in a way that was to "reveal preoccupations which led to 'musique concrète'". This production, therefore, was no mere concatenation of naive sound effects but a real attempt to elevate the combination of all sound elements regardless of origin to a level of a truly radiophonic work, albeit within a literary, dramatic, somewhat surrealistic context. And this, it should be noted, predates the commonly accepted beginnings of musique concrète by five years.

Two aspects can be identified from the period of La Coquille à Planètes. Naturally, both are connected in a complex network of relationships. Nevertheless, for the purposes of clarification they can be disentangled. Firstly, there is what can be described as Schaeffer's humanist reaction to technology. Secondly, and leading on from this, is the recognition of the potentially profoundly poetic nature of sounds heard whilst listening to the radio, thus without any visual confirmation of source. Both aspects remained central to Schaeffer's later thinking and, by extension, to much subsequent French thought on electroacoustic music.

Technology and Schaeffer's Humanism

Schaeffer's reaction to the new listening environment created by radio technology was not simply to accept the situation but to investigate the relationship between the listening subject and the object of his/her perception. This human dimension, "man as the measure of all things", the human capacities for knowledge and perception seemed a dominating factor in his thinking. Man was now placed in a new relationship with sounds. The first and perhaps most obvious effect of the radio were the new ramifications of the listening environment itself. Sounds can acquire evocative, almost magical qualities if they are decontextualized by being removed from their causal origins. This has been recognised by other media commentators. Marshall McLuhan, for example, wrote:

"If we sit and talk in a dark room, words suddenly acquire new meanings and different textures. (…) All those gestural qualities that the printed page strips from language come back in the dark and on radio." (McLuhan, 1964 p.303)

This condition of radio listening was described as acousmatic by Schaeffer and others: the term has since gained general acceptance in the electroacoustic medium. This acousmatic situation must be extended to all those listening environments in which sounds are heard without any visual confirmation of their sources. Consequently it is the natural manner of listening both to the radio and recorded sounds. This notion alone was sufficiently important for Schaeffer to claim that sounds listened to directly and acousmatically *"triggered off a whole process of discovery"* (Schaeffer, 1966 p.32). Indeed, Traité d'Acousmatique was even considered as a title for the Traité des Objets Musicaux.

I should emphasise that however important the acousmatic situation was in itself it must not overshadow the significance of Schaeffer's inspired use of real sounds for radiophonic art. Acousmatic situations were, and are, commonplace. Listening to instrumental or vocal music via gramophone records or the radio need not be particularly revelatory. Any moderately experienced listener would easily associate such sounds with their instrumental sources. Occasionally confusion might arise as a result of unorthodox orchestration or playing techniques but the full effects of the acousmatic situation would be minimal. The same was not generally true of anecdotal sounds in radiophonic art. Though often recognisable they were mixed, amplified, juxtaposed, resonance was added to create spatial illusions in ways that could not occur naturally. Thus the listener's relationship with these sounds is fundamentally different from the rarefied sounds of musical instruments.

Technology per se was not, therefore, the point of Schaeffer's researches. Machines allowed him to discover a new, almost transcendental relationship between himself and the world. They encouraged and directed the listener's perception and actively promoted a new sensitivity to sound. Schaeffer wrote:

"The age of mechanism, denounced wrongly by pharisees of spiritualism, is the age of the most inordinate human sensibility. It is not solely a question of machines for making, but of machines for feeling which give to modern man tireless touch, ears and eyes, machines that he can expect to give him to see, to hear, to touch what his eyes could never have shown him, his ears could never have made him hear, to touch what his hands could never have let him touch. As this enormous puzzle, which knowledge of the exterior world is, composes itself, strengthens itself, verifies itself and finally 'sets' into shape, man

recognises himself in it: he finds in it the reflection of his own chemistry, his own mechanisms. " (Schaeffer, 1970 p.92)

Note the epistemological reference towards the end of the quotation and its connection to Man's subjective experience of objective reality. The radio suggested to Schaefer that it went *"from the thing to the idea, from the concrete to the abstract"* (Schaeffer, 1977 p.23). Indeed, an entire methodology of studio practice resulted from these earliest stages of Schaeffer's humanist attitude to technology. He wrote:

"An experimental method in music should mean to listen: above all, before, during, afterwards. Because the object is unusual, the challenge is to discover humanity and beauty in it (…)" (Schaeffer, 1952 pp.179-180)

This method of analysis, of attempting to discover language from sounds - all sounds - contrasted with the ambitions of musicians who wanted to create sounds ab initio. While synthesis was entirely praiseworthy it had an entirely different agenda. In addition, Schaeffer's attempt to build a machine - a concrete "instrument" - before analysis was by his own account less than entirely successful. He realised the phonogène1 imposed structures on the sounds before their inherent characteristics had been examined. The listener heard the machine's registers, there was no automatic perceptual correlation.

Schaeffer's relationship with technology is a symptom, albeit an important one, of a profoundly influential underlying attitude. This introduces my second point: how sounds can acquire the revelatory characteristics hinted at by the acousmatic situation.

Schaeffer's "Language of Things"

I believe that Schaeffer, probably through his literary interests, assimilated many of the aesthetic beliefs of the Symbolists into his practices of radiophonic art. In his article from 1946 'Notes on radiophonic expression' (Notes sur l'expression radiophonique) Schaeffer refers to La Coquille à Planètes :

"I was suddenly aware that the only mystery worthy of interest is concealed in the familiar trappings of triviality. And I noticed without surprise by recording the noise of things one could perceive beyond sounds, the daily metaphors that they suggest to us." (Schaeffer, 1970 pp.108-109)

For "beyond sounds" Schaeffer had written "au-delà des sons". Certain sentiments are clearly recognisable as characteristic of Symbolist terminology and thought. Schaeffer's conviction that sounds, by being displaced through recording and radio, can reveal a reality beyond the normal, material world is entirely consistent with Symbolist thought. A sound need not simply call attention to its origins. In fact, due to the acousmatic situation the listener may have few clues as to the sound source in any case. Thus sounds, even quite ordinary prosaic sounds, could be in a sense "renewed". The acousmatic situation in conjunction with the juxtapositions made possible by radiophonic art can reveal new, multiple meanings.

Clearly one quotation is in itself insufficient evidence. However, in Schaeffer's writings of this period concepts and keywords appear constantly. Furthermore, in the aforementioned article he refers to and quotes extensively from the poet Paul Valéry. Valéry was an important figure in the French literary world. Though he abandoned poetry at the age of 21 to pursue scientific studies he resumed writing some twenty years later. Furthermore, he is an explicit link with the Symbolists (as a young man he attended Mallarmé's renowned Tuesday evening salons or Mardis). Valéry attempted a form of interdisciplinary thinking. He drew analogies from his extensive scientific and mathematical studies and used these to elucidate his investigations into the psychology of human creativity. Schaeffer, by the very nature of his profession, was no stranger to interdisciplinary thinking - indeed we should recall the sub-title of the Traité des Objets Musicaux - an interdisciplinary essay. It is not difficult to understand the empathy between Schaeffer and Valéry.

As confirmation of these tendencies two other Symbolist traits can be identified: the deliberate search for significance in a meaningless universe and the notion of analogy. In the same article Schaeffer described the early inspiration of La Coquille à Planètes: a chance encounter with a machine in the metro and of the sign "Sèvres", but also the much more mysterious inscription "Babylone". The clicks of the machine cried out for a dramatic context and Schaeffer compared his own attempts to create a means of expressing this chance experience with Valéry's account of the genesis of his poem (perhaps his best known) Le Cimetière Marin. Valéry described how a rhythm, a metrical line of ten syllables divided into six and four came into his mind (the French term is dizain). No words accompanied this chance occurrence but, Valéry continued *"gradually floating words fixed themselves"* (Schaeffer, 1970 p.108). After a long time this bare framework gave rise to the poem. Both men actively sought to create meaning in a world of chance events. Indeed, according to Mallarmé everything in the universe happens by chance unless a meaning is grasped and fixed by Man and then it is at best only temporary.2

In addition to this comparison Schaeffer relates his own experience with a shell (this is yet another reference to Valéry who wrote an article L'Homme et la Coquille). In this account Schaeffer recalls his experience as a child as he held a shell up to his ear and heard the sea. *"Scientists"*, he continued, *"will explain this by saying the sound is simply blood circulating in the ear, but as a child he had no problem in creating an analogy which "associated unhesitatingly the ear, the shell, the ocean or if you want, man, instrument, universe."* (Schaeffer, 1970 p.90). The sound was neither simply the objective sound nor the subjective reaction, but a subtle relationship between the two. The perceiver has to act, intentionally and consciously. By doing so a dynamic analogy is created, not necessarily intellectually conceived but emotionally felt. Once again the result is meaning. Schaeffer wrote:

"They are situated in our interior, in continuity with the physical universe, they are instruments. We find that these instruments of flesh, irrigated by our blood, maintained by the sweat of our brow, are capable of a symbolism of sensations more strange than the symbolism of language. They establish in correspondence between our consciousness and the universe, perceptually and reciprocally translate the non-human into the human." (Schaeffer, 1970 p.91)

Note the word "correspondence" - a notion of central importance to the Symbolists. A poem of this name - Correspondance - appears in Les Fleurs du Mal by Baudelaire and is fundamental to Symbolist aesthetics. Everything in the universe is connected in some mysterious way if these connections can be made to reveal themselves3. This must not be confused with a vague, pantheistic religiosity; it is rather a profound expression of how we as humans see our place in the universe. (Symbolists were, almost without exception, Catholics who had lost their faith.)

Thus the acousmatic situation and Schaeffer's humanist reaction to technology combined to reveal the poetic, evocative nature of decontextualized sounds. It would have been possible for him to continue to explore radiophonic art, to create a *"hybrid art between poetry and music"* (Schaeffer, 1966 p.24). For several years Schaeffer was still firmly committed to sounds for radio productions rather than music. We have Schaeffer's own words to confirm that his later musical developments followed a period of experimenting for a "technical introduction to a work specially conceived for the radio" (Schaeffer, 1970 p.92). He continued by stating that at the outset he did not have:

"(…) any other thought than of composing a series of studies, without preconceived subject, without literary concern, with the sole aim of giving me, in different allures4, from slowing down to speeding up, from the simple to the complex, opportunities for demonstrating radiophonic mechanisms, I was obliged to gradually enter into a subject whose inspiration was imposed as it were at each instant, of which the episodes were suggested to me by instrumental requirements." (Schaeffer, 1970 p.93)

It is clear, therefore, that in order to create sounds for radiophonic productions Schaeffer was obliged to experiment beyond simple recording, amplification and juxtaposition. Other procedures of manipulation had to be employed such as mixing and filtering. Listening to such recorded and transformed sounds in the studio he realised that they could function beyond sound effects. According to Michel Chion and Guy Reibel these became *"expressive procedures which the radio used for dramatic aims before electroacoustic music made them into procedures of language"* (Chion & Reibel, 1976 p.16). Chance again played a large part in Schaeffer's discovery. The unforeseen event was that produced by the sillon fermé the closed groove on the disc that Schaeffer had to use to record sounds. A closed groove functioned in the same way as a tape loop and a recorded sound could be repeated constantly. Chion and Reibel described the effect as *"a fragment of life caught in a trap, torn from its context, placed outside time and normal limits, repeated tirelessly"* (Chion & Reibel, 1976 p.26). At this point the distinction between radiophonic art and musique concrète becomes increasingly blurred.

This gradual but perceptible shift towards music proper can be detected in Schaeffer's book A la Recherche d'une Musique Concrète (Schaeffer, 1952). He recorded in the form of diaries his original intention of collecting physical objects from the sound effects department such as spinning tops, an alarm clock and rattles. He also noted with amusement the confusion of the officials who failed to understand why he should want sound sources without apparent concern for their ultimate context. On April 19th, 1948 Schaeffer recorded a bell after the attack: he reported that *"deprived of its percussion the bell becomes an oboe. I prick up my ears. Might a crack be appearing in the enemies ranks? Has the advantage changed sides?"* (Schaeffer, 1952 p.15). Some two weeks later he wrote *"Where does invention reside? When did it happen? I reply without hesitation: when I 'touched' on the sound of bells. Separating the sound from the attack constituted the inventive act. All musique concrète was contained embryonically in this inherently creative action on sound material."* (Schaeffer, 1952 p.16). Over the Easter period he conceived of a concert of locomotives and the rest of Schaeffer's development passes beyond radiophonic art and this article.

The Origins of Musique Concrète

In the transformation from radiophonic art to musique concrète Schaeffer was able to accomplish something that necessarily eluded the Symbolist poets. They wanted to renew words, to reveal their multiple meanings by placing them within the metrical structures of a poetic line, perhaps surrounding a word with others according to both semantic meaning and phonetic, concrete quality. Nevertheless, words still have a relationship, however multi-faceted with what is being signified. By contrast, once a sound is recorded its links with its source are diminished; after transformation they are probably completely broken. The sound can now attain the status of a sound object, it acquires an autonomous identity and each of its concrete aspects has the potential to participate in the musical discourse.

Schaeffer ultimately decided that sound objects, generally speaking, should not be too anecdotal. Perhaps he realised the problematic nature of anecdotal sounds and without repudiating the notion of musique concrète itself decided that the sounds should not become too illustrative. In the electroacoustic medium sound objects can occupy any number of positions from the explicitly anecdotal through various degrees of ambiguity to completely unpredictable sound behaviours. Perhaps today we have more opportunities to reassert the status of anecdotal sounds and explore areas of radiophonic art that Schaeffer did not pursue. Luc Ferrari, for example, referring to his work Hétérozygote stated unequivocally.

"(...) I wanted to make a language situated both on the musical level and the dramatic level. The use of realistic elements allowed me to tell a story, or allows the listener to invent images for himself because montage allows ambiguities..." (Chion & Reibel, 1976 p.66)

Anecdotal sounds in Trevor Wishart's Red Bird also supply many successful examples of such sound art.

If musicologists are to form an accurate evaluation of post-war European music (however frequently histories might need to be revised) the origins and vocabulary of this area of French musical thought cannot be ignored. Clearly this precursor of electroacoustic music did not originate from an application of technology by which to extend already existing musical ideas. This is an important distinction from the musical foundations that were extended by elektronische Musik in Cologne. However, it did motivate Schaeffer's initial theories which led in turn to the invaluable achievement of the Traité des Objets Musicaux. In addition it confirms the viewpoint, commonly expressed in Great Britain, that a too hasty conflation of French and German electroacoustic developments from the post-war period is a grotesque simplification. A grave disservice is done to both cultures.

The last words surely belong to Schaeffer:

"The miracle of musique concrète (...) is that during experiments things begin to talk by themselves, as if they were bringing us messages from a world unknown to us. If I gather together fragments of noises, cries of animals, the modulated sound of machines, I myself also strive to articulate them like words of a language that I would practise without even understanding and without ever having learned it: I am deciphering hieroglyphics. Does the difficulty of this conversation arise from the fact that the person with whom I am speaking does not have the same faith as me in the secret correspondence between man and the world of which music is one of the keys?

So this is what art is: a translation whose exactness is periodically monitored by experiment; establishing by groping around, rigorous correspondences between man and the world, the two universes similar in every respect, separated only by the surface of our skin." (Chion & Reibel, 1976 p.47)

Acknowledgements

Notes

1. There were in fact two phonogènes. Both were tape recorders which allowed replay at variable tape speeds, one being calibrated in discrete steps, the other having a finer, almost continuous range of speed variation. Some years earlier Schaeffer had considered an equivalent device with turntables and recorded discs - a "piano of turntables".

2. Another example of a chance occurrence for which a meaning is subsequently found by the artist (though only after some effort) is in Mallarmé's prose poem Le Démon d l'Analogie (Mallarmé, 1945 pp.272-273). In many ways these three accounts are strikingly similar. Valéry must have been familiar with the work by Mallarmé and it is entirely possible that it was also known to Schaeffer.

3. I am not suggesting that this kind of analogical thinking was invented by the Symbolists. For example, it was common in Mediæval thought and seems, perhaps unfortunately, to have been largely superseded by other philosophical developments of the Renaissance. However, vestiges continued to exist (see Tillyard, 1943, chapters 5, 6 and 7 for a good account of sixteenth century English "correspondences"). I am indebted to Christine North for this observation.

4. The French word allure was used by Schaeffer to refer to a generalised vibrato of either pitch or dynamic level.

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