

## GOD'S WILL OR PEOPLES' POWER

Believing in Sonic Environments

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## God's Will or Peoples' Power

### Believing in Sonic Environments

*Volonté de Dieu ou pouvoir du peuple ? La croyance dans les environnements soniques*

*¿Voluntad de Dios o poder del pueblo? La creencia en los ambientes sónicos*

Ute Holl

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## God's Will or Peoples' Power

### Believing in Sonic Environments

Music is often experienced as seizing, overwhelming and even overpowering its audiences even physically. It fuses the outer and inner realities with an essential, spiritual and natural force. The execution of music, writes Hegel in his *Aesthetic, lectures on Fine Art* is “the wonderful secret of an external tool’s becoming a perfectly animated instrument, and we have before us at the same time, like a flash of lightning, the inner conception and the execution of the imagination of genius on the most momentary fusion and most quickly passing.” (Hegel, 1975: 958). The power of music seizes the self “in the centre of its spiritual existence” so that it is “elevated by the musical work and activated by it” (Hegel, 1975: 906). As a space comparable to an environment created by lightning, sonic spaces have always been considered as a special battle ground of gods. Sonic experience raises the issue of believing in a specific space or a specific force that is not altogether controllable by man. In the case of the Greek Pan, this was a very material space, sun-lit and sexually violent, Johann Sebastian Bach attributed it to a single God, and Georg Wilhelm Friedrich Hegel, as if anticipating Marshall McLuhans distinction between social relations in acoustic or literal communities, pointed towards music as a force which animates the personal soul, suppressing reflection. For Hegel, making music was a technique of distinguishing uncontrolled noisy environments from the order of sounds. For men to be able to control the sonic battleground, sounds have to be transformed into the order of notes, that is, the acoustic into writing: “But music’s essential aim is to shape these sounds into notes.” (Hegel, 1975: 962). A materialist theory of sounds and music however should be able to re-relate sounds to environments and to expose the social to sonic experiences, translating the agency of the divine into social relations of power, force and violence. To believe in sonic spaces then is to precisely perceive what is going on around oneself. It also implies a basic infidelity towards the nature of existing orders, and, on the contrary, to believe in spaces perceived, as well as, eventually to believe in creating new spaces by making new sounds.

## Social Circuitry

During the Second World War, and even more so after it had ended with the alleged defeat of German fascism, new sounds, provisionally subsumed under the label of electronic music, entered the world, and with it, new and unknown sonic spaces. Or rather, these spaces were unknown to civilian audiences, who came to experience altogether new radiophonic environments out of their radios, in concert halls, and later in stereophonic and high fidelity equipped personal living rooms. Fidelity towards the real, or vice versa, the listeners' belief in the reality of sonically produced spaces, has since then literally become a matter of technological authentication and conviction. The technique of believing in a real sound space went by a magic signature: HiFi. However, this is an old story of new media. Thomas Edison could advertise the gramophone as being real to life, since the inscription of sound waves as grooves into wax cylinders could reproduce voices and sounds according to a reality that outmatched all former transcriptions of speech and noise in symbolical orders – such as the vocal alphabet or the Morse code. Early gramophone and radio listeners were convinced that what they heard had really existed, not because the transmission of music, voices and other sounds was particularly good, but because it was fundamentally different from any kind of reproduction of sound they had ever heard before.

With phonography and radio, sounds were transmitted according to their physical quality instead of as translated into a code of transcription (Peters, 2004). Physical recording of sound also meant, that all acoustic information was passed through and memorized by an apparatus, there was no literal system that would distinguish between sense and non-sense. Acoustic spaces were not inscribed according to architectural coherence but to qualities of loudness, delay or resonance. And finally all things were equal before the phonograph: men and machines, animals and things, subjects and objects as sources and receivers of frequencies. With the introduction of recorded sound, the concept of music and musical spaces also changed. Reproducibility in the age of technical media meant recording and transmitting music, voices and sounds afflicted with all sorts of physical or physiological glitches, noises and disturbances. In technical recordings of music, the sounds of the physical instruments are as important as the tones of the music played according to the score. All that is audible for the recording device, the qualities of the physical bodies of the singers as well as the delay of the spaces of the recording studio or concert hall are inscribed (Schmidt Horning, 2013). Technical hearing replaced the human form of listening, at least in the process of recording and reproducing sounds.

All of this information, as reduced and simple as it was in the early days of recording, also transformed the space of the real and reality for the early listeners, who could not but believe in some sort of existing space on the other side of the transmitting channel. However, this audible other space owes its

existence as much to the spaces recorded and produced as to the techniques of the recording process, to the qualities of devices and to the channel itself. From early on then, artificial effects of delay and reverberation were applied, to create the acoustic *impression* of space, the impression of distances, or to the transmit the impression of nearness, produced with the help of microphones, right across the Atlantic.

Researches on the history and archaeology of media techniques, first and foremost the relentless writings of Friedrich Kittler, a German media theorist, proved that most of the devices and techniques of sound production have derived from technologies of war (Kittler, 1999). This is true for the adaptation of radio techniques, “Funk”, deriving from First World War military communication and then adapted in civilian modes of radio, as well as for the magnetic tape recorder devised and deployed in the Second World war in the course of cryptoanalysis of voices (Tompkins, 2010). This is also true in the case of stereophony as an adaptation of indicator radio beams, with which pilots were addressed through the perceptive difference of their two ears in order to locate them in sonic triangles and control the blind flight of bombers in dark nights of terror attacks. Even if experiments on stereophony had been conducted before, it was the effort of war research that accelerated developments. Kittler envisioned this connection between war machines and entertainment culture as a stable trajectory in the history of, specifically, sound media: “Funkspiel, VHF tank radio, vocoders, magnetophones, submarine location technologies, air war radio beams, etc., have released an abuse of army equipment that adapts ears and reaction speeds to World War n+1. Radio, the first abused, leads from World War I to II, rock music, the next one, from II to III” (Kittler, 1999: 111). Unconsciously, this is the assumption, we are lured into aesthetic spaces formed by war technologies, while believing we are just listening to pop music (Kittler, 2013). In fact, many musicians acknowledge the fact. And listeners were convinced to hear it, specifically in the case of electronic music. Sources of early radio listeners, commenting on Karlheinz Stockhausen’s early pieces and performances for instance, confirm that they believed to perceive the sound of ongoing battles in these compositions (Schürmer, 2014). Indeed, as Kittler insists, “when Karlheinz Stockhausen was mixing his first electronic composition, *Kontakte*, in the Cologne studio of the Westdeutscher Rundfunk between February 1958 and Fall 1959, the pulse generator, indicating amplifier, band-pass filter, as well as the sine and square wave oscillators were made up of discarded U.S. Army equipment: an abuse that produced a distinctive sound” (Kittler, 1999: 97). It is not the single tone or sound which obscures the insight into the new sonic spaces, since the sound itself might even carry, sustain and reveal the genealogy of its own production in the context of war and arms, if attentively listened to. The problem at stake is, whether technologies or techniques of creating sound inevitably subdue people to the logics of the spaces they produce. This is specifically crucial for technical media, which produce their aesthetic impacts below the threshold of human perception.

Sonic studies have raised the question whether techniques and technical practises inevitably seduce their subjects into believing in the reality of artificially created spaces, and whether technical media force their users into a position of unmitigated belief in effects of something alien and unknown. In connection with sound systems and studios, this impact of the unknown has often been related to gods. Kittler, infamously, has in his last books discussed the approaching of the gods – using the Heideggerian notion of *Ent-fernen* as literally *reducing distance* –, conceiving of the Greek gods as a merry troupe based on a cosmological or universal code of Pythagorean intervals: Octave, Fifth, Fourth as 2:1,3:2,4:3. (Kittler, 2006 and 2011).

As opposed to this ontology of a code, the anthropologist and early theoretician of cybernetics Gregory Bateson has discussed the concept of gods in terms of data processing and the cybernetic circuits of his time. From an ethnologist's point of view, Bateson observed that a notion of gods can be a useful tool in terms of cybernetics, understanding them as personifications of long term social circuitry: "I suggest, that one of the things that man has done through the ages to correct for his short-sighted purposiveness is to imagine personified entities with various sorts of supernatural power, i.e., *gods*. These entities, being fictitious persons, are more or less endowed with cybernetic and circuit characteristics" (Bateson, 1982: 65). In any case, the model of gods or belief is linked to the modes of recording techniques, codes, transmission systems and distribution networks. A more terrestrial analysis of techniques of belief or make believe, however, should also look out for strategies to subvert hegemonic spaces created through media or, for that matter, devices of the divine.

## Cultural Techniques of Making Belief

Religion, it seems, or other systems of belief have never existed without very tangible forms of rituals and cultural techniques, deployed to relate material and immaterial realms. These techniques can be very simple, such as touching something with one's hands, as with the *mains negatives* of prehistoric paintings or in cults of stones (Didi-Huberman, 2008); it can be techniques of smoothing out and planing spaces, as raking the ground in Zen Buddhist rituals, or it can be techniques of carving and inscribing, as in the arts of writing and scripture, which are, in legends or holy books, often passed down as a *divine* gift; or it may be complex techniques of trance and ecstasy, demanding the observance of all sorts of orders concerning diet, costume, rhythm and movement, in ascetic as well as carnivalistic forms (Eliade, 1968). In all cases, spaces are created, much rather than simply accessed. Particularly in dealing with animals, wild ones or tamed, in breeding or in slaughtering, procedures of cultural techniques are essential. These turn the relations to animals into media of transformation, of inclusions and exclusions of strangers or aliens. Sacrificing, as an act circling around the moment of death, void, or nothingness, can in this sense be understood as dividing space into immanent and transcendent, material

and immaterial realms, or, as in the case of the Abrahamic, distinguishing between an earthly and a heavenly father, at the same time inventing and relating both sides of this imagination. Cultural techniques then, much rather than working on existing differences and antagonisms, actually draw those distinctions in the first place and thereby simultaneously create what they distinguish. Thus, cultural techniques much do not simply apply or execute existing cultural differences, but much rather transform the possibilities of making a difference at all (Siegert, 2013). Related to the antique notion of *colere* and *cultura*, making the land arable, cultural techniques in this sense refer to a temporal and spatial organisation of life.

Being performative, cultural techniques produce belief or believing as a secondary phenomenon. In modern forms of monotheism, ritual or religious exercises and practises are turned into techniques which short-circuit self-perception, in the folding of the hands in prayer for instance, as Julia Kristeva has observed (Kristeva, 1991), or in gestures which imagine the act of mirroring. These gestures, distinguishing between a social outer world and a coherent personal interior space, have produced religious cultures of introspection, cultures of identities established in self-description and confession, as well as epistemologies of doubt and self-doubt. Until around 1800 then, belief and religion were assumed to be the affaire of an internal soul, a soul which was thought to govern all spiritual, intellectual and perceptive human faculties.

With the aesthetical experience of new technical media, which were developed and introduced into everyday practises approximately between 1850 and 1900, such as gramophony and radiophony, photography and cinematography as well as the first forms of electronically produced images and sounds, mental faculties became a matter and effect of exterior causes. In the laboratories of the 19<sup>th</sup> century, human minds were subjected to continuous tests of reading and writing, listening and perceiving rhythms, seeing images and imagining forms and figures. Mental capacities such as understanding, remembering and associating were tested and calculated according to frequency and speed. The concept of an interior moral soul dissolved in favour of the model of a predictable mind, steered by curiosity and desire. Increasingly sophisticated interfaces between human bodies and technical machines were developed for precise measurements. And it is these interfaces that are the basis for the adaptation of technical media to human bodies. They have become general techniques of believing since they have been optimized as techniques of seeing, hearing and the haptic for the last 200 years and have, around 1900, provided metaphors and models for new disciplines, psychoanalysis or psycho-techniques, and even phenomenology. Sigmund Freud would conceive of the soul as of an optical apparatus, or of memory as of a writing pad, Théodule Ribot conceived of personality as an interplay of continuity and discontinuity, much like the mechanics of cinematic images<sup>1</sup>,

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1. For an extensive history of the cinema as model and metaphor of memory, cf. Klippel, 2014.

while the philosopher Jean Marie Guyot thought of memory as operating like a gramophone (Guyau, 1880). In each case, the unknown mechanics of transference between humans and machine, material and immaterial worlds, were studied as regimes of the unconscious. This relation between technical apparatus and human perception persists in the problem of conceiving of belief and making believe as of an issue of techniques.

## Incorporations

Ever since Orpheus or the Exodus, founding narratives of cult and religion have linked culture to the production of new and unexpected spaces. In the case of Orpheus, incidentally in a cult of music, cosmological links between the earth and the underworld are not only established, but their connections are mapped and described as viable, navigable. In the case of the Exodus, one might speak of a paradigmatic account of seizing a territory, colonizing and securing it. For modern Christianity, Alain Corbin in his study on the sound and language of church bells (Corbin, 1994) has given a fine example of producing and organising communal spaces, precisely parishes, in an administrative, social as well as an affective form through technologies of sound. Through chimes, the mundane orders of landscape and listening were structured and simultaneously charged with religious content. Again, the structure of bell's sounds themselves seems important here since bells produce only the harmonics of a specific tone, while the actual keynote is absent, a unique phenomenon in the spectrum of instruments. The order of time and space as well as affects, emotions and knowledge follow the sonic order which links them to religion and belief – and to a central void or absence that remains unperceived. At the same time, as Corbin described for the 19<sup>th</sup> century, those sounds can also provoke resistance, discomfort and angry reactions. New sonic techniques and practises not only produce new cultural concepts but will simultaneously destroy and decompose coherent cultures, religious or other.

The most infamous alliances of theological and technological practises have been all those forms of sensual illusions, techniques of trance and hallucination, which seize space and power through bodies. Here, excellent examples in the genealogy of media history are the Jesuit inventions and implementation of different devices of fascination, such as the *camera obscura* in the visual, or baroque organs in the sonic space, used as means of colonizing the South Americas. The inventions of Athanasius Kircher alone can be read as a concise cultural history of technically induced means or media of constructing belief (Ullmann, 1978; Szarán, 2013). The crucial lesson for media aesthetics is here, that America's first nation people were convinced to believe in an alien and distanced god through believing, exactly, in their own eyes and ears. Such strategies of conquering other cultures aesthetically, that is, through conquering their senses and sensual spaces, persist in all sorts of projection- and sound-systems applied in cultural forms of colonisation, of political conviction as well as in strategic warfare until today (Goodman, 2009).



Whether producing sensory effects with the help of technical devices, whether using them to cause pain through the violating impact of light and music, or whether seducing people to dance into oblivion, the entanglement of power relations, knowledge and embodiment in techniques of controlling light and sound is obvious here. Friedrich Nietzsche had observed in this context that “the strength of knowledge does not depend on its degree of truth but [...] on the degree to which it has been incorporated” (Nietzsche, 1974: 169). In replacing morals with cultural techniques of incorporation, or more generally, in replacing morals with media, Nietzsche established a critical discourse of aesthetics as politics. This notion of aesthetics as a negotiation of perception at the interface of the sensual, the technological and cultural relations, connects politics and the physical in a very strict sense.

Medially empowered aesthetical forms then, in the sense of applied cultural techniques, do not simply represent or follow dominant power relations. They can rather be considered as a means to produce them in the first place. The production of space does not emerge from the social, but can be understood as a form of social production. Space in this sense does not just concern actual and empirically describable spaces of existing societies, nor does it only regard the anticipation of a predictable future, but much rather the creation of potential spaces which occur during experiences of uncertainty, transformation and transition. Belief here is much rather the cause for the emergence of techniques than vice versa. It is the absence of any clear boundary or horizon, temporal or spatial, which calls for the invention of religion and knowledge in the first place. As Jacques Derrida pointed out in his considerations of religion, it is the void or desertification of space which precedes any form of belief in or for a future: “*Paradoxalement, l'absence d'horizon conditionne l'avenir même. [...] D'où l'appréhension d'un abîme en ces lieux, par exemple un désert dans le désert, là où on ne peut ni ne doit voir venir ce qui devrait ou pourrait – peut-être – venir*” (Derrida, 1996: 15). It is here that religions as cultural techniques appear to organize historical and social relationships in a common spatial experience. Therefore, media practises, however technically advanced and intellectually sophisticated, find themselves in the genealogy of ritual and archaic techniques of trance (Behrend, 2014). Knowledge, in the context of religion and media, always maintains a close relationship to the unknown, the unconscious and the void. Therefore it is produced, rather than supplemented, by tangible cultural techniques.

There is another aspect in the cultural organisation of space which is closely connected to the production of belief and religion, and in this case sound and music play a prominent role. As Mircea Eliade pointed out in his study of shamanistic techniques of ecstasy, the relation between the celestial and terrestrial, the holy and the mundane, between immanence and transcendence has especially been organized by music and sonic practises. As an example, Eliade describes the power of the shamanic drums to structure cosmic spaces and, simultaneously, to provide shamanic travellers with techniques of breaking through its boundaries, to the other side, so to speak: “*Retenons simplement*

que le tambour figure un microcosme avec ses trois zones – Ciel, Terre, Enfer – en même temps qu’il indique les moyens grâce auxquels le chaman réalise la rupture des niveaux et établit la communication avec le monde d’en haut et d’en bas” (Eliade, 1969: 148). Here, Eliade distinguishes between apotropaic functions of percussion instruments to exorcise or simply scare spirits and chase them away, which is the usual function of noisy, rattling instruments in carnival or military music, on the one hand, and the power of music to establish cosmological relations between the world, the heavens and the underworld, *Ciel, Terre, Enfer*, on the other. In this context, figures like Moses or Orpheus retrieve their shamanistic character. Both cross over from terrestrial human spaces to underworldly or celestial inhuman realms. Both receive the gift of a medium in order to do so. In the case of Moses, the same procedure which takes him onto the mountain, beyond the horizon, into the wilderness beyond the reach of other men, simultaneously provides him with the gift of scripture and the divine law, inscribed into the plates, in order to re-stratify the world according to the new laws. Orpheus is equipped with the lyre, an instrument which subdivides, with the help of its strings, the cosmological order according to relations of 1:2; 4:5; 3:4, octaves, fifth or fourths, and thus allows him to calculate and cross the boundaries between heaven, world and underworld. Through cultural techniques and with the super-individual gift of media, music then, instead of being considered as celebrating the power of a God – as Johann Sebastian Bach insinuates in his signature *solī deo Gloria* – should rather be considered as a form of producing the concept and even the form of transcendent power, in order to then appropriate it. Religious belief is the response to culturally organized and incorporated structures of differences in the spatial organisation of the world, a response that includes, as Jacques Derrida reminds us, responsibility in religious cultures of belief (Derrida, 1996). Already in 1994, Derrida discussed modern religious wars in the light and logics of technical media and its aesthetic. The connections he draws between the return of religious beliefs and the rise of electronic and digitally controlled media seem relevant in view of present wars and clashes of religions, even if his description of media structures is based on a slightly aged panoptic notion and the idea of a central, single divine eye which ruled the state networks of the 1990:

*Comme d’autres naguère, les nouvelles « guerres de religion » se déchaînent sur la terre humaine (qui n’est pas le monde) et luttent même aujourd’hui pour contrôler le ciel au doigt et à l’œil; système digital et visualisation panoptique virtuellement immédiate, « espace aérien », satellites de télé-communication, autoroutes de l’information, concentration des pouvoirs capitalistico-médiatiques, en trois mots, culture digitale, jet, et TV, sans lesquels il n’est aujourd’hui aucune manifestation religieuse. (Derrida, 1996: 35)*

Today, we would rather emphasize the decentralized nodes of networks, the appropriation of algorithms, the interferences and interactions of media processing and distribution procedures generating new intermediary structures.

Nevertheless, it remains a task to consider the production of time and space in terms of emerging electronic and distributed media networks and technologies. Not in a deterministic way though, but in terms of identifying the discourses of space and the moments of possible resistance concealed or discovered in them. Manuell Castells observed, equally in the 90s, that the notion of virtuality which replaced the older mimetic form of representation, instead of precisely describing viable social structures, had become synonymous with techniques of make believe and producing belief:

Time is erased in the new communication system when past, present, and future can be programmed to interact with each other in the same message. The *space of flows* and *timeless time* are the material foundations of a new culture that transcends and includes diversity of historically transmitted systems of representation: the culture of real virtuality where make-believe is belief in the making. (Castells, 1996: 374-375)

As opposed to visual media, where the virtual has a precise meaning in optics, sonic concepts of the virtual space are more complicated to grasp.

## **Strategies in sonic environments**

In returning to post-war productions of sonic spaces as they were produced in radiophonic and electronic studios, with machines and devices stemming from war and weaponry, different strategies of constructing appropriating spaces can be distinguished. In studios and their practises, as they were established in the forties and fifties in Paris, Cologne, London, New York and Princeton it is those cultural techniques designed to distinguish between homogeneous spaces and the blurred boundaries of soundscapes and sonic environments which are crucial to assess politics of space.

In Paris, it was Pierre Schaeffer who had founded an experimental studio in the Radiodiffusion-Télévision Française which he had conquered as a radio engineer in the early 1940s already, during Résistance activities, working on a civilian radio for a post-war French society. After the war and besides travelling to international radio conferences as well as to former colonies to set up independent radio stations there, Schaeffer's experiments began with capturing sounds in different situations and environments. His discovery was to isolate recorded sounds, and in transferring them on closed grooves of records, cutting off the very characteristic attack-phase of the sonic envelope (Schaeffer, 2012: 39). He would then compose with those isolated concrete elements of music, as he called them, which were in fact abstractions from recognizable real sounds, mixing and repeating them "one note per turntable" (Schaeffer, 2012: 7). In accelerating and decelerating sounds, thus creating transpositions in frequencies, he discovered that "with this apparently quantitative change there is also a qualitative phenomenon" (Schaeffer, 2012: 14). It is probably worthy to note in the context of techniques of make belief, that Schaeffer here points to his method as being not solely of human descent: "We have taken up the tool that technology gave us, [...] and the result, after all, is not entirely

our work. The child of gods and men, of will and change, it is a found and not entirely willed object that we are displaying to find out if it can be of any use” (Schaeffer, 2012: 62). Through recording sounds in the field – of train stations, cities or artisan workshops – Schaeffer kept close contact to existing environments as well as, simultaneously, transforming them into unheard of new sonic spaces.

The American based experimental tape music, as edited in the studio of the engineer-couple Bebe and Louis Barron since 1948, or by Vladimir Ussachevsky and Otto Luening at the Columbia-Princeton Electronic Music Center, and specifically in the works of John Cage on this field, privileged aleatory strategies, in order to unintentionally encounter unknown sonic events and enter unknown sonic spaces. While alienating and transforming instrumental sounds and human voices with the help of magnetic tape manipulation, they still based their works on elements and traces of real instruments, surroundings and soundscapes. To the Americans, broadly speaking, the idea of controlling all parameters of sound seemed futile. More interesting to these tape artists was the element of chance as well as the versatility in discovering new sound sources. Belief here is linked to the hope of entering an uncontrolled realm of perception.

By contrast, the compositions of the Cologne based radio studio of the Westdeutscher Rundfunk (WDR) worked with strictly electronic means only in order to be able to control all parameter of sounds, that is, pitch and duration, tone color and dynamics as well as the distribution of sounds in space. This immensely difficult task, which Karlheinz Stockhausen describes in his 1958 essay on music in space, “Musik im Raum” (Stockhausen, 1963), seems to be very much in accord with a German tradition. This is conspicuously true of the founding fathers of the *Studio für elektronische Musik*, Werner Meyer-Eppler, who worked as a young post-doc researcher at the Institute for Physics in Bonn exactly from 1939-1945, thereby having access to the first magnetic tape recorders which were applied in crypto-analysis. Working on the synthesis of sounds, the biography of Meyer-Eppler is a main proof of Kittler’s hypothesis, that all entertainment is but the misuse of military equipment.

But this isolation and control of electronic music from all environmental influences does not only begin with electronic experiments of the Second World war. Already in 1929, the concept of relying on technical media alone to create sonic spaces and to exclude all interferences of sonic environments into electronic sound was conceived of during the first radiophonic experiments. Sound engineer Rudolf Winzheimer, director of telegraphy in the Munich branch of the Reichspostamt, who had to survey the experiments in the early German radio laboratory, demanded that “the coupling of single sounds to an overall sound has to be effected with electrical means. Spatial acoustics are strictly to be avoided” (Winzheimer, 1929). Meyer-Eppler follows this trajectory in strictly excluding existing sounds from electronic music (Meyer-Eppler, 1955: 135). Electronic music in the German tradition seems specifically detached from all material and social resistance. Perhaps it is no wonder then,

than that Karlheinz Stockhausen, whose music and specifically “*Der Gesang der Jünglinge im Feuerofen*” of 1955, has inspired so many pop musicians into creating autonomous musical spaces, developed a close link to super human points of view<sup>2</sup>. The alternatives between complete control of sound parameters and the opening of electronic sound towards the environment, the social, the material or some unknown resistance through logics of chance has turned into a political issue.

## Exiles and Deserts

In two works of art finally, both concerning German politics and the violence of exile, the potentials of aesthetic procedures in the creation of heterogenous and unanticipated new spaces. The first case is Arnold Schoenberg’s unfinished opera “Moses and Aron” and the technique of dodecaphonic composing according to which he wrote the music. The second work is Jean-Marie Straub and Danièle Huillet’s filmic adaptation of the same opera, in which they transpose the compositional technique into cinematic, audio-visual forms. In both cases, distinctions between defined territories and the blurring of boundaries towards the environment are at the disposal of the people listening and watching. Both aesthetic procedures develop strategic forms of resistance against hegemonic space. Both deal with the issue of power relations inherent in aesthetic techniques themselves, simultaneously striving to provoke disbelief in actually existing structures, and proposing elements and procedures for just social spaces. As unlikely as it may seem, the musical evocation of monotheistic space by Arnold Schoenberg, whom Bertolt Brecht had famously called “the old royalist”, are conceptually similar to what Straub and Huillet in the 1970s proposed as a radical form of revolutionary or communist interventions. The power of music and the techniques of creating an unanticipated space is in both cases linked to the concept of the people and their liberation, as it is dealt with in the Book of Exodus. In both works however, as Gilles Deleuze has observed, the people are missing, or rather: the visual space of the people is intentionally left blank. A cursory analysis of the opera and film reveal that for all of the artists, a missing people’s power is present precisely in the sonic or aesthetic structure itself.

Arnold Schoenberg worked on “Moses and Aron” mostly in the 1930s. His opera is negotiating Moses’ impossible mission to liberate a people that does not yet exist, since those present, in the accounts of the Exodus as well as in the opera, mostly reject their liberation. Schoenberg conceived of the opera in the early twenties, following an event in the summer of 1923, when he and his family were driven out of their holiday residence in Mattsee,

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2. Stockhausen shocked his admirers and enemies alike when he commented on the attacks of 9/11 that this had to be understood as the “greatest work of art that is possible in the whole cosmos”, cf. Antony Tommasini in: *The New York Times*, September 30<sup>th</sup>, 2001, <https://www.nytimes.com/2001/09/30/arts/music-the-devil-made-him-do-it.html>

Austria, by the local municipality, discriminating them as unwanted Jews. Since then, Schoenberg had pondered on several Zionist projects, searching for a promised land for survival. He continued to work on the libretto and the score of the opera throughout the 1930s, while leaving Berlin, after the president of the Prussian Academy of Sciences had sworn to cleanse it of its “Jewish elements”, and while fleeing to France, Spain and finally into exile to California. He would never complete the project, finishing the first and second acts while the third remains libretto text only.

At the core of the opera is the entanglement of power and media, or more precisely, techniques of making belief, in the course of introducing or rather inventing a monotheistic space. Schoenberg, in his text as well as in the composition of the music, is approaching the issue in raising the question whether this new realm should be realized through pure thought, or reason, and communicated as an abstract law, or if this should rather be achieved by means of sensual perception and aesthetic conviction. In terms of media theory, the central conflict deployed between the figures of Moses and Aaron is, whether the power of music and a new sonic space resides in the laws of a controllable code and controllable networks of distribution – or else in its not altogether controllable effects and affects. The question is raised, whether political poetology demands pure knowledge of the order of things, or rather the sensual but blind belief in one’s ears and eyes.

Schoenberg wrote the opera “Moses and Aron” according to his “Method of Composing with Twelve Tones Which are Related Only with One Another” (Schoenberg, 1964), initially introduced in a lecture at the UCLA in 1935. The composing technique is based on a single set of notes. The rule is, that a tone may only be repeated if all other eleven of a chromatic scale have been played in certain orders of transformation. In the aesthetic experience of the opera, this rule itself cannot be easily identified. In the abundance of sounds, with, in parts, many tones sounding at the same time, all sorts of sonic events can be heard, even reoccurring melodies identified, moments of counterpoint discerned, but hardly the mathematical recursions and inversions, retrograde and retrograde inversions of sets, series and rows. Nevertheless, the overall effect of this technique is very easily heard and felt, since the sound of Schoenberg’s opera is based on strict equipartition, on an equal distribution of tones in space. The systematic destruction and equalling out of conventional sonic structures could be called a desertification, *Verwüstung* in German. It is indeed a technique that audibly enters a new sonic realm where the relations of sounds turn into the beauty of a surprisingly different and strange sonic space. This audibly differs from the aesthetics of melodies, harmonies and even the compositions in harmonics and tone color as already devised by Richard Wagner. Thus, dodecaphonic composing can be considered a cultural technique which creates new differences in the ordering as well as in the perception of tones and their sonic relations. The notion of desertification, *Verwüstung*, of course matches the situation of the opera’s people, in their indistinct plural, waiting in the desert, in the camp, at the foot of the Sinai mountain, without law or belief.

Gilles Deleuze has called this sonic space of equal distribution an *espace lisse*, as opposed to *espace strié*, taking both notions from the musician's vocabulary of Pierre Boulez, turning it into a political strategy: « *Boulez dit que dans un espace-temps lisse on occupe sans compter, et que dans un espace-temps strié l'on compte pour occuper* » (Deleuze et Guattari, 2000, p. 596). Deleuze, familiar with the cinematic adaptation of the opera, not incidentally compares *espace lisse* to a nomadic space, *l'espace nomade*, which according to Jean-Marie Straub is the space of Moses, while *l'espace strié* corresponds to the sedentary, *l'espace sédentaire* of Aaron who works on pacifying the people through a work of art. The difference of *espace lisse* and *espace strié* is carried further. In music, the smooth space, *espace lisse*, is not structured by traditional forms of intervals: there are no more octaves or quints, no tonics or subdominants, no keynotes or leading tones. It is a space without leaders and without hierarchies. Every tone is equally represented in the system and refers, without centre, without melody, without harmony to its unique and particular place in the structure of sets. With this technique of equalising space, Schoenberg – as well as Straub/Huillet in their adaptation – work towards opening a structured system towards its further sonic environments, demonstrating how this music produces resonances in specific surroundings which, accordingly, reveal their own sonic response. It is here, that, intentionally or not, Schoenberg exposes a shamanistic side of the figure of Moses, who has to break through the boundaries to the other side, into the space of a new medium and a new law. Even if this space is conceived of as transcendent in the theological terms, in music this transition remains a very terrestrial task.

A good example for this technique is the opening of the opera, Moses' calling by the sound of the *burning bush*. Schoenberg composed the bush's sound as a polyphonic mixture of voices and instruments, which reverberate indistinguishably in the same tone colours. The soprano blends in with the flute, mezzo-soprano and alto voice with the English-horn, tenor, baritone and bass are in tune with bassoon, bass-clarinet and cello. This is already a very apt example of a powerful sound. Its effects transcend any singular source we know and even blends with other sounding elements of stage or objects. Confronted with this multifarious sound, Moses, the nomadic shepherd, has to make a distinction and then a decision: if he perceived the sound as pure noise and non-sense and ignored it, he could move on with his animals. And indeed he would “prefer not to”, requesting that he could be spared of the mandate: “I am old, I ask thee, let me tend my sheep in silence” (Schoenberg, 1958: 5). But if he hears a voice in the bush, and thus distinguishes between pure noise and a specific sound, then he has to leave his sheep and accept the mission. In his response toward the presence of noise he shows the responsibility Derrida had demanded of all religion.

In his efforts to level or smooth out sonic space, Schoenberg had hoped of one day realizing the opera with electro-acoustic means and instruments. And indeed he had conceived of using technical media in the opera. In regard to the *burning bush* Arnold Schoenberg noted: “It might be feasible for instance to

separate the voices from each other off-stage [although remaining visually in contact] using telephones which will lead through loud-speakers into the hall where the voices will then coalesce” (Schoenberg, 1958: 3). Telephones have historically been closely linked to the opera, since early telephone networks were used to distribute classical music and events into the private homes, forming an individual network, not a mass media. But besides being carriers or channels for transmitting operas, telephones had, very early, been discovered as instrumental techniques in their own right: Experimenting at the Berlin radio station at Königswusterhausen and in the academic Rundfunkversuchsstelle, the experimental radio laboratory, Friedrich Trautwein, engineer and composer, who later constructed the famous Trautonium, already remarked that small telephones were attached to single instruments to increase the quality of broadcasting. (Trautwein, 1925). Schoenberg carries this idea further in using the telephones not just as recording or distributing devices but as instruments of signal processing, of changing the quality of sounds as well as of the sonic space produced. He devised telephones as means to separate, divide, transform, remix and distribute sounds according to specific bandwidths on stage. This technique parallels the desertification on the level of tones in terms of a technical media intervention.

## The Making of an Off-Space

Straub and Huillet have found an altogether different solution for this scene. They filmed the opera in the amphitheatre of Alba Fucense in the Abruzzian mountains, which is neither a Greek theatre, which would suppose a people as a political *demos* in its own concept of freedom, nor a Roman one, with its *populus romanum* entertained and silenced by displays of violence. On the one hand, Straub and Huillet carry the levelling of Schoenberg’s sonic space into the visual, beginning with the very long pan, which actually spans more than 300 degrees, over the landscape, showing its cultural and historical layers, transforming space into a two-dimensional tactile surface. On the other hand, the sound track itself is another form of adapting Schoenberg’s technique of creating space. In the beginning, this is no more than a mere irritation. On the sound track of the film, the speaking voice of the singer Günter Reich is heard, clearly in synchronous sound, and as far as our perception of environmental sound is concerned it seems to be recorded on location, in the space of the amphitheatre. But we also hear a brilliantly recorded orchestra, obviously from off space, as well as solo and choir voices. This surprising and inexplicable mixture of sound elements is the result of a solution which Straub, as he says, had always “dreamt” about.

Weeks before the actual shooting in the mountains, the orchestra parts and the voices that were to be heard from the films *off* were recorded in the studio of the Austrian Broadcasting Corporation, with the Vienna Symphony Orchestra and Choir, conducted by Michael Gielen. On the set, in the arena of the amphitheatre then, these parts were played through tiny earphones to



the singers and monitors with the orchestral parts were distributed among the choir. The voices on location were steered by the pre-recorded parts, and then recorded, shot by shot, on different tracks. This circuit of between technical media and human bodies is one of the first circular operations at work in this set up. In the arena then, in the estival landscape, only the voices of the singers could be heard, together with the sounds of the environment.

All elements of the sound system had been connected through technical media. But each element, technical, human or hybrid, operated according to its own right: the specific bodies of the singers would create their own space-time, *espace-temps*, in relation to the Viennese recordings. The voices were not subjected to a single metric time, *temps strié*, or a central measure, but they were regularly related to each other. What is more, the influences of the climate, heat, wind and movements, changed the voices and their expressions. Just as in the composition of twelve tones, there is not central or stable point of control in the Straubian sonic space. There is not standard time or uniform metric law in the opera filmed, there are but relations and micro-differences.

The sound engineer of the film, Louis Hochet, recorded all of the elements, studio-tapes as well as arena recordings, during the film shoot and mixed them on tape, without any central pulse or pulsation. Only at the very end of the procedure, in the projection, the manifold sonic events came together to form an acoustical space in its own right. Perceived as acoustical layers in time, it is exactly what Deleuze described as *espace lisse*, smooth and differing planes of sound. The complete sound is finally perceived in cinema. There is no pre-filmic sound or experience.

Glenn Gould has called Schoenberg the most important composer of the twentieth century, precisely because he does not privilege a single tone nor a pre-structured listening culture. But equally important is Schoenberg's risky demand to integrate sounds and noise into the opera. This is evident in the scene of the Golden Calf, where Aaron has to calm down the grumbling people who miss and doubt their leader and have started to disbelieve in the idea of a new god. In his distress, Aaron has created the Golden Calf. This metallic sculpture of an animal, untouchable as it seems on its pedestal, will in the film's sequence finally be replaced by parts of a slaughtered bull. Here, Straub and Huillet invert the motif of the sacrifice: instead of following transubstantiation from the real animal into transcendence, they end with an image of the real creature, a tangible body, cut up by butchers. In this sense, they keep the people alert to the false techniques of representation, instead offering an utterly material image of bodies in all their vulnerability – a vulnerability that is incidentally also shown in the images of the local peasants, actors for the people in some of the scenes.

In his libretto, Schoenberg had conceived of the aberrations around the Golden calf as of a wild orgy, planning, for the music, all sorts of percussions and casseroles to clang and batter when the slaughtering for the grand feast begins. Straub and Huillet however start the scene with a long shot of animals calmly grazing around the inanimate golden statue of the little bull. Again, the

filmic ensemble gathers all sorts of animals, tamed or herded or uncontrollable beasts such as a huge camel. Just as Schoenberg in his score had demanded to blend the sounds of the music with sounds of the environment in order to form a wild and savage soundscape, the cinematic adaptation of the opera blends the noises of the animals with the sounds of the instruments: as we perceive the animals entering the space of the real theatre and its sandy grounds and windy noises, the bassoon blends with the cattle, the violins with the sound of the sheep. The overtones produce the possibility of joining instruments, animals, men and machines without denying antagonisms. This blending of animal voices and musical instruments strangely varies the technique of the blending of singer's voices and instruments for the divine voice from the burning bush in the beginning of the opera. Here, we are convinced that a divine voice can be heard in the sounds of creatures – if we want to carry the responsibility for this perception. Just as Moses had to decide whether to hear a voice in the burning bush or not, and then to accept the mission of liberating a people or to deny it, the people of the cinema audience has to decide, when listening to the cloud of sounds, if it just perceives noises, or if it hears the evocation to enter a space beyond familiar figures and representation. It is this realm that Straub, in his film “Kommunisten” (2014), stages as the space of communists – not communism. In the film of Straub and Huillet it becomes urgent to make the distinction which, as a cultural cut, switches the figure of the familiar with that of the alien or unknown. Its urgency is derived from Schoenberg's experience at Mattsee as well as from the experience of migration, exile, xenophobia or racism in every single case.

On May 4<sup>th</sup> of that year, Arnold Schoenberg wrote to Wassily Kandinsky: “when I walk along the street, [...] each person looks at me to see whether I'm a Jew or a Christian ...”<sup>3</sup> In this letter he is giving a report on the Mattsee incident, his experience of being driven out of a holiday resort in Austria on the grounds of being Jewish. In his letter, Schoenberg does not distinguish between forms of perception and forms of behaviour. He writes to Kandinsky: “You will call it a regrettable individual case if I too am affected by the results of the antisemitic movement. But why do people not see the bad Jew as a regrettable individual case, instead of as what's typical? [...] But it isn't an individual case, that is, it isn't merely accidental. On the contrary, it is all part of a plan ...”<sup>4</sup>

For Schoenberg, the way of looking at and the way of listening to somebody then can make a difference. His musical compositions as well as Straub and Huillet's film are about making differences with aesthetic means. Like the power of music Hegel discusses, the effect of sound and sonic spaces is not something to believe in or not: sounds perform social relations. In musical compositions, possibilities of making distinctions are produced. Still, these

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3. Arnold Schoenberg to Wassily Kandinsky, Mödling, May 4<sup>th</sup>, 1923 (quoted according to Schoenberg, 1964: 90).

4. *Ibid.*

distinctions can be made or else ignored. In a further remark, Schoenberg explains that these seemingly symbolic differences lead to actual forms and excesses of behaviour: “But what is anti-Semitism to lead to if not to acts of violence? Is it so difficult to imagine that?”<sup>5</sup>

Schoenberg, on his way into exile, had to rely on the production of a unique and reliable space which he based in the sonic. It served as a space he could believe in, when all other projects, Zionist plans or professional perspectives, failed. But while the project of the opera failed for Schoenberg himself, his deployment of a new sonic space proved to create new spaces for a next generation of musicians.

Jean-Marie Straub on the other hand, himself on the way into exile since 1950s, escaping the French army and a possible deployment as a soldier in the Algerian war, was alert towards the possibly murderous exclusion of and contempt for others, strangers, people in exile. When he heard the opera for the first time in 1959. Danièle Huillet, who conceived of a much larger context of the desertification of spaces, the violence of seizing lands and imposing a new law, and Jean-Marie Straub together extended the politics of sonic spaces towards a politics of sonic environments, intentionally including landscapes, animals, the climate as well as light and lightning into the opera's aesthetics. Perceiving of sonic environments as ecological entanglements in listening to the entangled soundscapes is not a matter of believing, but the effect of equally mixing frequencies of all sources – and the effect of considerate listening. Making this believable is a matter of cultural techniques and the decision to mix electronic and microphonic analogue sounds in equal terms. Desertification is the description of this equality. The incredulous and infidel of all religions are often sent into the desert to “purify their thinking” as Moses sings in Schoenberg's opera. Usually, they return with a new set of differences and a new system of belief. Straub and Huillet point towards the responsibility of creating, respecting and believing in one's own set of equally distributed, non-exclusive differences in the social sphere. They call it communism.

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5. Schoenberg to Kandinsky, *op. cit.* p. 92-93.

## Bibliography

- BATESON Gregory, 1982, "They Threw God Out of the Garden. Letters from Gregory Bateson to Philip Wylie and Warren McCulloch", *CoEvolutionary Quarterly*, Winter 1982, p. 62-67.
- BEHREND Heike (ed.), 2014, *Trance Mediums and New Media. Spirit Possession in the Age of Technical Reproduction*, New York, Fordham University Press.
- CASTELLS Manuel, 1996, *The Information Age: Economy, Society and Culture, vol. 1: The Rise of the Network Society*, Oxford, Blackwell.
- CORBIN Alain, 1994, *Les cloches de la terre. Paysage sonore et culture sensible dans les campagnes au XIX<sup>e</sup> siècle*, Paris, Albin Michel.
- DELEUZE Gilles, GUATTARI Félix, 1980, *Mille Plateaux*, Paris, Éditions de Minuit.
- DERRIDA Jacques, 1996, « Foi et Savoir. Les deux sources de la « religion » aux limites de la simple raison », in J. Derrida, G. Vattimo (dir.), *La religion. Séminaire de Capri*, Paris, Éditions du Seuil, p. 9-85.
- DIDI-HUBERMAN Georges, 2008, *La Ressemblance par contact*, Paris, Éditions de Minuit.
- ELIADE Mircea, 1969 [1951], *Le Chamanisme et les techniques archaïques de l'extase*, Paris, Payot.
- GOODMAN Steve, 2009, *Sonic Warfare. Sound, Affect, and the Ecology of Fear*, Cambridge, MA, MIT Press.
- GUYAU Jean-Marie, 1880, « La mémoire et le phonographe », *Revue pour la France et l'étranger*, 5<sup>e</sup> année, IX, janvier- juillet, p. 317-322.
- HEGEL G.W.F., *Aesthetic. Lectures on Fine Art*, Vol. II, transl. T.M. Knox, Oxford, The Clarendon Press, 1975.
- KITTLER Friedrich, 1999, *Gramophone, Film, Typewriter*, Stanford, Stanford University Press.
- , 2006, *Musik und Mathematik, Band 1: Hellas, Teil 1: Aphrodite*, Paderborn, Wilhelm Fink Verlag.
- , 2011, *Das Nahen der Götter vorbereiten*, Paderborn, Wilhelm Fink Verlag.
- , 2013, « Rock Music: a Misuse of Military Equipment », *The Truth of the Technological World. Essays on the Genealogy of Presence*, Stanford, University of Stanford Press, p. 152-164.
- KLIPPEL Heike, 2014, *Kino und Gedächtnis*, Frankfurt/Main, Stroemfeld Verlag.
- KRISTEVA Julia, 1991, *Strangers to Ourselves*, New York, Columbia University Press.
- MEYER-EPPLER Werner, 1955, "Elektronische Musik", in F. Winkel (ed.), *Klangstruktur der Musik. Neue Erkenntnisse musik-elektronischer Forschung*, Berlin-Borsigwalde 1955, p. 133-158.
- NIETZSCHE Friedrich, 1974, *The Gay Science*, translated with a commentary by Walter Kaufmann, New York, Vintage Books Edition.
- PETERS John Durham, 2004, "Helmholtz, Edison and Sound", L. Rabinovitz and A. Geils (eds.), *Memory Bytes. History, Technology and Digital Culture*, Durham, Duke University Press, p. 178-198.
- SCHAEFFER Pierre, 2012, *In Search of a Concrete Music*, Berkeley, Los Angeles, University of California Press.
- SCHMIDT HORNING Susan, 2013, *Chasing Sound. Technology, Culture & the Art of Studio Recording from Edison to the LP*, Baltimore, John Hopkins University Press.

- SCHOENBERG Arnold, 1950, "Composition With Twelve Tones", in A. Schoenberg, *Style and Idea*, New York, Philosophical Library, p. 102-143.
- , 1958, *Moses and Aron, Oper in drei Akten, Studien Partitur*, Mainz, Edition Peters.
- , 1964, *Arnold Schoenberg letters, selected and edited by Erwin Stein, translated from the original German by Eithne Wilkins*, Berkeley, University of California Press.
- SCHÜRMER Anna, 2014, "Elektronische Musik, ein Missbrauch von Heeresgerät? Wie Arms & Technology zu Arts & Technology wurden", *Neue Musikzeitung*, 63, <https://www.nmz.de/artikel/elektronische-musik-ein-missbrauch-von-heeresgeraet> (accessed July 11, 2019).
- SIEGERT Bernhard, 2015, "Material World. Geoffrey Winthrop-Young talks with Bernhard Siegert", *Art Forum International*, 53, 10, p. 324-333.
- STOCKHAUSEN Karlheinz, 1963, "Musik im Raum", *Texte zur elektronischen und instrumentalen Musik. Bd. 1. Aufsätze 1952-1962 zur Theorie des Komponierens*, Cologne, DuMont Schauberg, p. 152-175.
- SZARÁN Luis, 2013, "Jesuitenreduktionen in Südamerika – Glanz und Verfall musikalischer Kunst", in J. Arnold (ed.), *Gottesklänge. Musik als Quelle und Ausdruck des christlichen Glaubens*, Leipzig. Evangelische Verlagsanstalt, p. 211-220.
- TOMPKINS Dave, 2010, *How to Wreck a Nice Beach: The Vocoder from World War II to Hip-Hop. The Machine Speaks*. Chicago, StopSmiling Books.
- TRAUTWEIN Friedrich, 1925, *Drahtlose Telephonie und Telegraphie in gemeinverständlicher Darstellung*, Leipzig, Akademische Verlagsgesellschaft.
- ULLMANN Dieter, 1978, "Zur Frühgeschichte der Akustik: A. Kirchers 'Phonurgia nova'", *Wissenschaftliche Zeitschrift der Friedrich-Schiller-Universität Jena. Mathematisch-naturwissenschaftliche Reihe*, 27, p. 355–360.
- WINZHEIMER Rudolf, 1929, *Übertragungstechnik*. München, Berlin, R. Oldenburg Verlag.

### **God's Will or Peoples' Power. Believing in Sonic Environments**

*The article approaches the issue of believing and making believe from the point of view of sound and music. According to the classical aesthetic theory of Hegel, the power of music takes a grip on the subject and animates it. According to a newer theory of cultural techniques and to media thinking, the individual and the social space, the subjective and the objective are much more entangled. Arnold Schoenberg, in negotiating religious space, establishes close relations between the animate and the inanimate, the human and the environmental in his opera "Moses and Aron". Music and sound do not force themselves upon the listeners, but summon them to perceive and make new differences and decisions. Jean-Marie Straub and Danièle Huillet in their adaptation of the opera still enforce this entanglement towards an ecological understanding of social relations.*

*Keywords: Sound Media, Cultural Techniques, Electronic Music, Twelve-Tone Composition, Environmental thinking.*

### **Volonté de Dieu ou pouvoir du peuple ? La croyance dans les environnements soniques**

*La question du croire et du faire croire est ici abordée du point de vue du son et de la musique. Selon l'approche classique héritée de l'esthétique de Hegel, le pouvoir de la musique tient à sa capacité à saisir le sujet et à l'animer. Une approche plus récente, liée à la théorie des techniques culturelles et à la pensée des médias, entrelace plus étroitement l'individu et l'espace social, le subjectif et l'objectif. Travaillant l'espace religieux dans son opéra « Moïse et Aron », Arnold Schoenberg établit une relation étroite entre l'animé et l'inanimé, entre l'humain et l'environnement. Musique et sons ne s'imposent pas d'eux-mêmes à l'auditeur, mais ils l'invitent à percevoir de nouveaux écarts et à prendre de nouvelles décisions. Dans leur adaptation de cet opéra pour le cinéma, Jean-Marie Straub et Danièle Huillet mettent plus encore l'accent sur l'entrecroisement de la compréhension écologique avec la relation sociale.*

*Mots-clés : Médias sonores, techniques culturelles, music électronique, dodécaphonisme, pensée environnementale.*

### **¿Voluntad de Dios o poder del pueblo? La creencia en los ambientes sónicos**

*La cuestión del creer y del hacer creer se aborda, aquí, desde el punto de vista del sonido y de la música. Según el enfoque clásico heredado de la estética de Hegel, el poder de la música se debe a su capacidad de envolver al sujeto y de animarlo. Un enfoque más reciente, vinculado a la teoría de las técnicas culturales y al pensamiento de los medios de comunicación,*

*entrelaza más estrechamente el individuo al espacio social, lo subjetivo y lo objetivo. Trabajando el espacio religioso en su ópera “Moisés y Aarón”, Arnold Schoenberg establece una estrecha relación entre lo animado y lo inanimado, entre lo humano y el medio ambiente. Música y sonidos no se imponen al oyente por sí mismos, pero sí lo invitan a percibir nuevas distancias y a tomar nuevas decisiones. En su adaptación cinematográfica de la ópera, Jean-Marie Straub et Danièle Huillet, insisten aún más en el cruce entre comprensión ecológica y relación social.*

*Palabras claves: medios sonoros, técnicas culturales, música electrónica, dodecafonismo, pensamiento medioambiental.*