

# Electroacoustic improvisation as metalanguage and fixed point (i)

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[ Show someone a picture of a rose, and then ask that person: “What do you see?” It will almost always be the case that the person replies: “I see a rose,” though in fact she sees (and *knows* that she sees) merely the *picture* of a rose. Now play someone a recording of a buzzing bee, and then ask that person: “What do you hear?” It will almost always be the case that she replies: “I hear a bee buzzing,” though in fact what she hears is merely the *recording* of a buzzing bee. Contrary to appearances, though, the two cases are *not* symmetrical: in the case of *hearing* it may very well be that the person listening does *not* realize that she is listening to a *recording* of a buzzing bee, because that fact has been kept hidden from her. ]

## 0. Music needs music to explain music. [TAG]

1. Through a series of successive approximative circumscriptions we provide in this ongoing study<sup>1</sup> an extensive analysis and detailed interpretation of the practice and theory of EAI, electroacoustic improvisation, a subgenre of (western) improvised music that originated a little over 40 years ago and at the moment of writing counts an impressive and still increasing number of practitioners.<sup>2</sup>

1.1. EAI is related to, and partly developed from within, the practice of *free improvisation* (sometimes simply referred to as *free* by its practioners). Free improvisation as a musical style developed as of the mid 1960s in Europe and the United States from a combination of influences related to, specifically, free jazz and the avantgarde classical (*academic*) music of those days.

1.2. It is not easy to pin down a precise formal characterization (‘definition’) of free improvisation. The fact that *free* as a musical style has to remain somewhat loosely-defined, is inherent to its practice. Best way to catch it, is work one’s way around it, in a series of flanking movements.

1.21. Free improvisation’s immanent point of departure and arguably sole *axiom* is the creation of music while abolishing all a priori existing (musical) *rules*, thus having the music arise from nothing but the taste(s) and inclinations of the players involved at a certain time and in a certain place.

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<sup>1</sup> This is the first in a series of papers in which we analyze the current practice of EAI as a *metalanguage* with respect to the manifold of particular (‘self-idiomatic’) and at times close to being ‘private’ – musical ‘languages’ (ways of expression) that arose and arise as a result of the postmodern condition of western academic music (cf. 9.4). Closely related is our interpretation of EAI’s functioning as a *fixed point*.

<sup>2</sup> Random sampling of data obtained from community web sites like *myspace.com* and from participation in mailing-lists and ‘specialist interest groups’ (such as hosted e.g. by *yahoo.com*) suggests for European countries, USA, Japan an average number of 5 active practioners of EAI per population slice of 100.000 as a possible but probably conservative estimation. For the regions indicated, this will amount to a total of at least 25.000 regular electroacoustic improvisors.

1.22. This strive for – some sort of *semblance* to, a *feeling* (however illusive) of – freedom, accounts for the readily assimilation of free improvisation into the happenings and performances as part of 1960s and 1970s art movements like Fluxus, and its early and profound influence on the ‘progressive’ and ‘experimental’ pop- and rockmusic that is so characteristic of that same period.

1.3. The *symbiosis* with exponents of the visual and performance arts, as with exponents of popular culture, is an important characteristic of the practice of EAI today.

1.31. Similar *symbioses* characterize the paradigm shifts that gave rise to an increasing diversification and stylistic proliferation of western music, ever since in the second half of the 19th century via chromaticism the ‘art of sound’ started to break away from the confines of strict tonality, and moved on to atonality, dodecaphony, serialism and beyond.

2. “We must enlarge and enrich more and more the domain of musical sounds. Our sensibility requires it.” Thus wrote Luigi Russolo in ‘Arte dei Rumori’ (*The Art of Noise*), his ‘Manifesto futurista’ from 1913 [RUS]. “Audacity gives all prerogatives and all possibilities. [ ... ] I am not a musician, so that I have no acoustic preferences, nor works to defend. I am a futurist painter who projects on a profoundly loved art his will to renew everything [ ... ]”

2.1. Russolo<sup>3</sup> produced his pamphlet at a time and age that, along with the society that it mirrored, western art set out along the (soon found to be irreversible) path of *modernism*, embracing the present and rebelling against nineteenth century academic and historicist traditions. Artists turned their back on all that was considered *outdated*, and wished to confront directly the economic, social and political aspects of a new and emerging fully industrialized world.

2.2. It was also in 1913 that during the christmas holidays spent with his family in Rouen, the French painter Marcel Duchamp composed an *Erratum Musical*, by randomly picking notes written on little bits of paper that were drawn from a hat.

2.21. Russolo’s *Manifesto* and Duchamp’s *Erratum* have nothing to do one with the other. Which does not prevent them from being deeply connected.

2.3. Neither Duchamp nor Russolo stood alone, nor did they act in isolation (though Duchamp – arguably – more so than Russolo). Neither thought of himself as a musician (though Luigi Russolo – arguably – became one).

2.4. Russolo was not the first to advocate, nor the first setting out to conquer and use, “the infinite variety of noise-sounds”<sup>4</sup>. Marcel Duchamp was not the first to let the composition of a music be determined by chance<sup>5</sup>. Luigi Russolo however appears among the first to make such ado, a such ‘noise’ about noises, while Duchamp lived on to

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<sup>3</sup> Russolo himself in turn was influenced by the ideas of the italian composer Ferruccio Busoni as expressed in his 1907 “*Sketch of a New Esthetic of the Art of Sound*”.

<sup>4</sup> \_Worth mentioning is the mysterious “*Symphonie des forces mécaniques*” of the french composer, theorist and critic Carol-Bérard (1881-1941), that sources date as early as 1908 or 1910, but of which nothing appears to be known but its use of ‘motors, electric bells, whistles and sirens’. It is not clear whether this work actually has been performed, and if so when and where? (Cf.: <http://berard.soundblog.net>)

<sup>5</sup> \_Cf. Wolfgang Amadeus Mozart’s ‘dice game’.

become a most enigmatic among icons of 20th century art.

2.41. Their appearance here is largely *emblematic*.

2.5. ‘Noise’ and ‘chance’ are two basic ingredients of EAI.

3. During the almost century that has passed since Russolo insisted upon the opening up of the gates circumscribing the domain of *musical* sounds (gates put up by history to keep (western) music free from the myriads of referential and significant but very much random sonic events that come with the majority of the *Tatsachen* (facts) that together constitute our world), these very gates gradually but surely seemed to *vanish*. They became *phantom gates*, not delimiting *music*, but merely a *kind* of music.

3.1. Maybe too much already has been written [<sup>KAH</sup>] and said about the role of John Cage in the growing awareness that any border one might draw between ‘sound’ and ‘music’ must remain but a matter of speak.

3.11. Cage’s 4’33” with utter precision turns the inside of ‘music’ out by turning its outside in, thus demonstrating there being neither an ‘in’ nor an ‘out’.

3.2. It is a characteristic of certain – though not all – events involving EAI that at times there is no clear-cut ‘in’ nor ‘out’. It may remain unclear – even to the performers involved – at what precise moment a performance has started, just as it may be remain long time undecided whether or not it has come to an end.

4. It is interesting to observe that, even though being utterly convinced of the necessity of the advent of the new, and with ‘no works to defend’, also the most blatant among early modernists insisted on the fact that it would be inconceivable to simply – complete and unabridged – incorporate a worldly sound (*‘noises’*) into the future – futurist – music. Any worldly sound *per se* comes together with its worldly signified, (that is: a *narrative*), which makes it *referential*. This was deemed a ‘degeneration’, affecting music’s spirituality, its detachment and exemplary abstraction, which for the art of music – and in modern times *de facto* for *all* of the arts – was considered to be a *not done*. We will refer to this as the *imitation taboo*.

4.1. Ideal, *pure (musical)*, sounds are a-referential, *abstracted* from specific contingent cause-and-effect narratives; they are a-historical. Instrumental sounds approximate a-referentiality through *auto-referentiality*: context-free, an instrumental sound primarily refers to itself.

4.11. Ideal, *pure (musical)*, sounds are anonymous.

4.12. It can of course be argued that no sound ever can be *truly* anonymous. Hence that there is no such thing as *pure* sound.

4.2. “[The] new orchestra will produce the most complex and newest sonic emotions, not through a succession of imitative noises reproducing life, but rather through a fantastic association of these varied sounds,” Russolo wrote in his manifest. [<sup>RUS</sup>] This was a prime reason for him to invent and built, in cooperation with Ugo Piatti, a whole collection of modern instruments: the ‘noise-intoners’ or *intonarumori*.

4.21. The *intonarumori* were put to use during early *bruitist* concerts in divers italian cities, but also in London, where 12 performances took place in the Coliseum, in june

1914. Subsequent concerts were planned in Vienna, Moscow, Berlin, Paris, but these were canceled due to the outbreak of war.

4.22. Russolo rushed off to experience at first hand ‘the very new noises of Modern Warfare’. [DAV] Set to a such *bande sonore*, the First Great War (1914-1918) that raged, mainly in Europe, caused death to some 20 million people and wounded 20 million more.

4.23. After the War had come to an end, Russolo continued to investigate and explore his vision of a futurist music played by a futurist orchestra.<sup>6</sup>

4.3. Edgar Varèse in the 1920s and 1930s demonstrated the potential of the traditional symphony orchestra as an *intonarumori*, by focusing on and unlocking the rhythmic and timbral wealth of a large arsenal of percussion instruments. He also incorporated the – highly referential – *siren*, undoubtedly first among sonic icons of the modern industrial age.

4.31. There were a *lot* of sirens then ...

4.32. It was in the new Russia of the communist revolution that futurist composer Arseny Avraamov wrote his *Symphony of Factory Sirens*. This megalithic piece of *concrete* ‘social realist art’ seems to have been performed twice: first on the occasion of the fifth anniversary of the Russian revolution in the Caspian port of Baku, and again one year later in the Moscow of 1923. Avraamov’s orchestra included choirs (to be joined by the spectators), factory sirens, a steam whistle organ built from some fifty steam whistles, cannons, foghorns, artillery guns, machine guns and hydro-airplanes, conducted by a team of conductors using flags and pistols, with the composer overseeing and leading the work atop a factory roof.

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4.34. The siren also features in George Antheil’s pulsating *Ballet Mécanique* from 1924, together with three airplane propellers of different size and material. Besides two traditional piano’s Antheil’s *Ballet* used 16 player piano’s, 4 bass drums, 3 xylophones, a tamtam, and 7 electric bells.

4.4. The – at times obsessive – quest for a ‘new music’ or ‘the new’ in music throughout the 20th century went hand in hand with the search for new means to (re-)produce sounds, to be used alongside or as a replacement for the traditional instrumentation.

4.41. The (re)search for and construction of novel ‘sound producing devices’ for some was merely a means to an end. This for example was the case for American maverick composer Harry Partch, who built a large collection of acoustic instruments in order to pursue his idea(l)s of a music based upon a theory of just intonation. [SCH] In other cases novel sound producers were developed as an end in and by itself, and used in works related to the advent of what are called *sound installations* within the visual arts, or more independently within a discipline that nowadays tends to be referred to as *sound art*. [LAB]

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<sup>6</sup> \_The very modern Dutch painter Piet Mondrian, who attended an *intonarumori* performance in June 1921, in the Théâtre des Champs-Élysées in Paris, commented and objected that Russolo’s noises remained too much ‘reproductions of natural sounds’. The experience inspired the author-to-be of *Broadway Boogie Woogie* to lay down his own peculiar vision on a future music in two long articles that soon afterwards appeared in the Dutch ‘modern art’ magazine *De Stijl* (1921/1922).

4.42. There is a vast transitional area, an area of ‘crossing over’, between *music* and *sound art*. It seems impossible to indicate precisely where the one stops and the other begins. It is even questionable whether the two eventually *can*, or should, be distinguished at all.<sup>7</sup> The distinction as it exists and is being sustained seems due to historical, social *and* economic conventions and conveniences, within societies based upon a strict division of labour and distinct tasks to be performed, in which *music* stands apart as a communal ‘product’ that is being produced by *musicians* that to this end are *produced* by that same society; just as *science* is the communal ‘product’ being produced by *scientists* educated and designated to such end by society. Thus we are caught in an intricate and continuous *feedback-loop*, in which we define our culture as much as it is defining us.

4.5. The use of self-built and/or (even) *found* sound producing contraptions, that in technical sophistication may vary from the primitively simple to the highly complex, is an integral part of the current practice of EAI.

5. Through the invention, development and advent of ever more powerful technologies for, most notably, transport and instantaneous (*light-speed*) communication, in the course of the 20th century our world became an incomparably much *w i d e r*, but also a far smaller (that is: a *denser*) place than it was before.

5.1. The development of techniques for *recording* and *playing back* sound, dissociating it from its original physical source, played a major role in the eventual dissolution of the *imitation taboo*, as it became gradually but readily clear that the simple act of recording sounds eradicated any possible line drawn between ‘music’ and ‘noise/sound’ by showing that any such line necessarily is *arbitrary*.

5.21. Dissociating a sound from its source – dubbed *schizophonia* by R. Murray Schafer – is an act of abstraction (see e.g. [NAT], p. 53). A recording of the sound of a woman’s screaming primarily refers to itself: by its very nature it has become auto-referential, just so as the sound of a tone bowed on, say, a violin, refers to nothing but itself.<sup>8</sup> Thus any recorded – hence abstracted – sound becomes *musical*.

5.211. It is through the possession and *use* of technology for recordings, that we – in hindsight – become aware that also the very act of *listening* functions as a means of recording, hence of abstracting sounds.

5.3. Potentially *any sound* may be recorded and become *musical*, including those lifted (abstracted) from other musics. And once recorded – made musical – forever it will remain available for *schismogenesis* (as Steven Feld, borrowing a term from George Bateson, calls the recombination and recontextualization of schizophrenic sounds) [FEL].

5.3.1. An early, though undoubtedly not first, example in EAI stems from early 1970s duo performances of saxophonist Evan Parker and percussionist Paul Lytton, in which Parker

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<sup>7</sup> As suggested by Stephen Vitiello (e.g. as part of the discussion in the (online) symposium “*Sound Art Now*”, organised by Artforum in the spring of 2004) it may be helpful to think of *music* as ‘sound in time’, whereas *sound art* might be thought of as ‘sound in space’. Interesting as a such distinction may be, we are convinced that it can not stand up to closer scrutiny as a workable means to separate ‘music’ from ‘sound art’,

<sup>8</sup> An instrumentalist together with his instrument clearly – *ensemble* – constitutes a (dynamic) collection of retrievable, i.e.: *recorded* sounds, as well as a means to play them back.

integrated the playing back of cassettes with recordings of the duo's earlier performances.

5.4. Each time we *see* adds to the memory of vision; each time we *listen*, adds to memories of sound: the – schismogenetic – use of recorded – schizophonic – sounds issued from a great many different sources, and on a variety of current (digital) or no longer very current (magnetic tape, vinyl disk) supports, together with their corresponding playback devices functioning as *intonarumori*, again is an important characteristic of the current practice of EAI.

6. Along with the ever faster development of new communication and media-technologies, the 20th century saw a steadily growing use of sounds, otherwise considered to be *extra-musical*, in musical contexts, transcending their formerly just *tolerated* use as 'illustration'. The use of *recordings* of referential sound, either 'real' (*reportage*) or as re-created by engineers and foley workers, became an indispensable narrative tool in radiophony and cinematography, whether in combination with traditional music or not.

6.1. It were the radio and cinema that from their early days onwards, and in their subsequent development, have laid an important basis for what may eventually become a unified art of *all* sounds (or even *all* vibrations, including those outside the range of human hearing), whether that will still be called music or not.

6.2. Pierre Schaeffer was given the means to create in Paris his *Studio d'Essai*, a studio for radiophonic teaching and research, in the early 1940s. It eventually led him to define *musique concrète*, a music composed solely from pre-recorded – schizophonic – sound. Schaeffer himself in 1948 spoke of his 'experimental music' as being a "*collage et un assemblage sur bande magnétique de sons pré-enregistrés à partir de matériaux sonores variés et concrets.*"

6.21. Before adopting and exploiting the reel-to-reel tape recorder as a compositional tool, Schaeffer created his collages by the combined playing back of (closed groove) gramophone pressings of sounds he recorded outside. These early works were loop-based, and came with a rhythmicity that was not so much 'composed' as it was 'imposed' by technology.

6.3. Also Pierre Schaeffer persisted in insisting on the necessity of de-contextualizing sounds if such were to be used in and give rise to a *music*. This was partly in order to be able to distinguish between his *musique concrète* and sonic illustration or radiophonic reportage.

6.31. The act of abstraction-by-recording was deemed but a – necessary – first step. Subsequent *treatment* should then ensure the finalization of a recorded sound's a-referentiality.

6.32. The sounds used in *musique concrète* were to be 'new' (that is: anonymous, hence *pure*) and *per se* meaningless, *stripped* from all intentional as well as all accidental *meaning*. Only thus rendered *neutral* they were deemed fit for use in the building of *new* meaning.

6.321. But why not use meaning to build meaning?

6.4. In EAI the use of referential sound is ubiquitous, as is the referential use of sound.

This includes any type and sort of pre-recorded sound played back from any possible sound carrier, as well as the use of the (necessarily aleatory) sounds picked up using radio receivers (short- or other wave).

6.41. Many performers in EAI show a predilection for the use of the analog sound carrying media that meanwhile have become more or less obsolete (like gramophone records and analog magnetic audio tape). Unlike the more recent digital media, in the analog case the played back sounds will unmistakably bear the stamp of the medium, being mingled as they are with the medium's proper *sonicity* (e.g. the rhythmic clicks and ticks – at 33, 45, 78 bpm – of a gramophone record being played back, the hiss, wow and flutter, also of e.g. compact cassette tapes...). Moreover, unlike with digital alternatives, sound recorded on analog media is prone to be effected by the gradual *wear* of its support: a process of deterioration, of gradual degradation of the sounds, that gives rise to transforms the original.

6.42. For similar reasons of proper *sonicity* (the typical sound of 'sliding' up and down a frequency range, static, morse code signals, et cetera) as well as because of its inherent *unpredictability*, the use of radio receivers (and more specifically of *short wave* receivers), often in the wake of its use in the 1950s and 1960s by Cage, Stockhausen and others, has become widespread in EAI. In direct line with the use of radio signals and -receivers in EAI one makes increasingly use of (divers transformations of) 'disturbances' due to electromagnetic interference caused by other types of electromagnetic radiation, as emitted by a wide range of different external sources (e.g. cell phones, electric motors ...)

7. Technological progress, in combination with a growing understanding and effective mathematical description of the physical phenomenon of sound, enabled the creation of instruments based upon a controlled generation of sounds through electr(on)ical means. Among the early ones some were novel (thérémin, ondes martenot ...), others aimed at imitating the sound of existing acoustical instruments (electric organ).

7.1. *Electronic music* originally took a position diametrically opposed to that of *musique concrète*. Whereas the latter's primitive material consists in 'full', 'completed', *concrete* sonic objects that are subjected to procedures of *stripping* and subtraction (*analysis*), the former's starts from what we may designate as *sonic atoms*, for example sine waves of fixed frequencies, or *clicks*. These *pure*, elementary sonic objects then are subjected to procedures of *compositing* and addition (*synthesis*).

7.2. Originally, both *musique concrète* and *electronic music* (were obliged to) use(d) magnetic tape as their canvas, and analog (scientific and engineering) equipment for the generation of 'atomic' electronic sounds. Audio / electronic music studio composition techniques based upon the physical manipulation of magnetic tape, though not abandoned completely, have over the last couple of decades largely been replaced by the virtual manipulation of digital sound files within software environments for digital sound processing.

7.3. Pioneers of electronic music in the 1950s marveled at the prospect of the possibility to built (*design*) sounds from scratch, to create a music with never-before-heard sounds; to not only compose the *music*, but to also compose the *sound*. At first the 'new' electronic

sounds were hailed as the ‘sounds of the future’. In those days “the future still existed”, and these were the sonic cues that signaled its coming. Meanwhile parts of that particular future became present, became past, and electronic sounds are an integral, mundane, part of its soundscape. Technological progress has made basic ‘electronic sounds’ easy and cheap to generate and corresponding ‘sounding’ devices are integrated in a myriad of our artefacts, from – typically – children’s toys, to almost all of the equipment used in home or work environments, and those used in and for transport. We are continuously being informed by a large range of relatively short electronic sound signals (*‘beeps’*) about the divers states and modes of functioning of the tools and equipment that we use and that surround us.

7.4. It is interesting to observe that conversely in the non-standard (*hors genre*) use and treatment of their instrument, instrumentalists in free improvisation, and especially those using wind instruments, increasingly discovered and started to built their improvisational contribution around a spectrum of sounds that very much approaches the typical ‘early electronic music’ sounds, based on the combined application of e.g. ‘filtering’ and ‘enveloping’ on continuous oscillator sounds.

7.5. The non-traditional use – in all possible senses – of traditional musical instruments and the re-use and modification of the electronic sound generating possibilities inherent and found in a large range of devices most of which were not originally intended as ‘musical instrument’ (referred to as *circuit bending* [<sup>GHA</sup>]) is part of the practice of EAI.

8. The above provides a first, preliminary circumscription of the contemporary practice of electroacoustic improvisation which is the subject of this paper.

8.1. EAI is a form of *free improvisation*. More specifically, we propose to denote by EAI any freely improvised music in which at least one among the equal ‘voices’ is brought forth by the use of other than a traditional (western or not) (acoustic and/or electrically amplified) musical instrument.<sup>9</sup>

8.11. Even though they do share certain formal characteristics, *free improvisation* should not be confounded with the *free music* as it was championed by australian-born composer Percy Grainger (1882-1961)<sup>10</sup>. The term *free music* at times, though, is used as a synonym for free improvisation.

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<sup>9</sup>\_This should not be taken as a ‘definition’, but rather is meant by way of first ‘approximation. Please note that the denomination EAI is not (yet) widely used, although it has been applied before to indicate subgenre(s) of free improvisation. Sometimes one seems to reserve the term to denote free improvisation that is characterized by quiet, slow moving, minimalistic sound textures, with extended droning sounds (*“slow noise”*), and one stresses the use therein of digital sound processing software, mainly run on laptop computers. We consider the adjectives ‘quiet’, ‘slow’ and ‘minimalistic’ to be unnecessarily restrictive, and at the very most applicable to certain ‘schools’ – or maybe better: trends – in EAI. It seems equally restrictive to impose the use of DSP software as a characteristic, as would be the imposition of the use of any other single instrument / tool.

<sup>10</sup>\_Grainger quested after a music based on moving tones, precluding harmonic stability and ignoring any basic assumption about musical relationships and methods. It is usually thought of as a polyphony of long sustained tones capable of continuous small changes in pitch, and where the separate voices *“are not enslaved to one another by rhythmic same-beatedness”*. In order to be able to ‘verify’ his ideas and hear sketches of his free music compositions (rather than as performance devices) Grainger and his collaborators



8.12. Free, total improvisation, free music, instant composing, spontaneous music, meta music, intuitive music ... all are terms that at some point or other over the last fifty years have come to denote a music produced by an individual musician or a collective that, by consciously and through active effort avoiding overt references to recognizable musical genres, strives to shake off bonds that often are as much of a social as of a musical (artistic) nature.

8.121. French saxophone player Bertrand Gauguet<sup>11</sup> insists on his choice for free *improvisation* being primarily a political choice. (In view of centuries of white men's overt exploitation of blacks and being white: how could I play a black man's music? How could I dare to play free *jazz* ...?)

8.122. "Society is a mirror house, in which all activities reflect and deform one another," Jacques Attali observes in *Bruits*, a *noisy* metaphorical essay on the political economy of music [ATT].

8.13. Derek Bailey, in *Improvisation. Its nature and practice in music* (1992), notes regarding free improvisation: "Diversity is its most consistent characteristic. It has no stylistic or idiomatic commitment. It has no prescribed idiomatic sound." [BAI]

8.131. Clearly this is an apt description also of the development of music in general in the second half of the 20th century.

9. Many of the seeds for a new music that were sown during *modernism* came to fruition in the period that followed it. They did so explosively, and near simultaneously, producing an avalanche of novelty, a *tsunami* of sound. The Second Great War (1939-1945) and all that came with it undoubtedly were the landslides that caused it, and by which – at least as far as music is concerned – the period of modernism came to a grinding halt.

9.1. Reginald Smith Brindle in *The New Music* (1975) [BRI] singles out two events, "more significant for mankind than anything since the birth of Christ. Firstly, atomic bombs were dropped on Hiroshima and Nagasaki. Secondly, man has walked on the moon."

9.2. The number of deaths as a direct effect of the 20th century's Second Great War is estimated at 72 million.

9.3. "Music has always reflected the outside world and sublimated it," Smith Brindle writes, and while our world's "events and facts may have seem to have little to do with music, [ ... ] in reality [they] have gone far towards dictating its developments." [BRI] Young post-war composers generally were convinced that in view of what mankind had gone through, it was necessary for music to in some way to find a new start.

9.4. But "[i]f music had had 'to begin again' [ ... ], there could hardly have been such a wealth of alternatives, or so many contrasting and irreconcilable factors, as in the late 1940s." [BRI] Many alternative and often fundamentally different approaches towards musical creation, over the following two, three decades were frantically pursued in view

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constructed a number of ingenious machines. Apart from some of these *prototypes*, only a couple of short score fragments and a few experimental recordings of Grainger's *free music* remain.

<sup>11</sup> \_Personal communication, July 2007.

of a *possible* new music. Thus music as an art form entered the postmodern condition<sup>12</sup> in which it seems to persist ever since.

9.5. Part of the erratic development of music over the last fifty years can – nay *should* – be seen as an attempt of ‘music’ to break away from itself; as an attempt to free itself from music. An attempt at ‘liberation’ and ‘escape’ that has brought along an extreme proliferation of ‘styles’ and of ‘genres’, and a seemingly unlimited thirst for and absorption of influences, from other, ‘exotic’, cultures, as well as from neighboring arts.

9.6. “I am tired of renewing the form of music – serial or aleatoric, graphic or five lines, instrumental or bellcanto, screaming or action, tape or live ...” [*sic*] Nam June Paik wrote as early as 1963 in a text (duplicated and distributed by himself) and entitled *Postmusic. The Monthly Review of the University for Avant-garde Hinduism*.

9.61. Elsewhere we propose the use of the term *post-music* as a common denominator for the many current practices in the arts, both musical (*music*) and visual (*sound-art*) that (at times) consciously (or even unconsciously) reflect or include/make use of reflections on the state of today’s often overly saturated urban soundscape, with its intriguing sprouts of spontaneous schismogenesis and so very dense cultural entanglement. [<sup>FS1</sup>]

9.611. EAI, the contemporary practice of electroacoustic improvisation with which this paper is concerned, must be considered *post-music* in this sense.

10. Though ‘not being initiated by anybody’ in particular, free improvisation emerged as a musical/artistic activity of increasing importance as of the 1960s. It did so under the combination of two main influences.

10.1. As one among these there is *jazz music*. In the 20th century *jazz* is the western world’s main musical genre in which improvisation is a key element. It originated in the african american communities in the southern United States out of a spontaneous combination of a manifold of influences from (west-)african and european musical traditions, as an original black american music, whose development and worldwide distribution became inextricably intertwined with the birth and rise of the (white american) phonographic industry and the promotion of its products through (white american) radioplay.

10.2. Free improvisation’s other main impetus stems from the postmodern condition of western (academic) music and its gradual opening up, over the first 25 years after the Second Great War, to any sound one may find or produce, to every imaginable way of organising sounds, ranging between strict and formal mathematical methods and pure chance, to every possible way of generating sounds, from purely human to strictly machine, and which found composer-musicians and musician-artists following whatever path would lead them to a sounding state.

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<sup>12</sup> One should distinguish of course carefully the postmodern condition of music from postmodern as a (possible) musical *style*. As a *style*, we take postmodern music to be a music having the characteristics of postmodern art in general (including for example a tendency towards self-referentiality, irony and eclecticism in form and genre; certain of the practices for which we propose (9.51) the term post-music are postmodern in style, though they are not necessarily so). As a musical *condition* postmodern designates nothing but the state of music after modernity, without referring to any particular style or characteristic.

10.21. Academic music since has persisted in this state of having become a beast with a many different faces, cursed with the gift of a thousand tongues, none of which (yet) seems to have gained enough power to make itself heard widely enough to drown out the others.

10.211. Two of its earlier poles and centers of attraction are epitomized by the Zen-inspired anti-rationalist works of Cage (“*The aggregates of sound have no necessary direction*”) and those based on a strict serialist architecture with definite positivist tendencies, as for example in Boulez (“*Il y a suffisamment d’inconnu*”) and early Stockhausen.

10.212. In view of such antipodes, in a 1961 invited talk in Darmstadt entitled “*Vers une musique informelle*”, Adorno [<sup>ADO</sup>] muses on the possible emergence of a new kind of music which would be the inherent result of a dialectics of musical innovation: a *free* music, rejecting form and defining itself not in terms of external laws, but in terms of its own musical substance. In this *musique informelle* musical expression abandons the totality of inherited structural categories in order to become absolutely free.

10.213. Adorno cautions that effectively free music must remain an unattainable ideal, because in rejecting all prior form and recognizable formal restrictions, it will become unintelligible (hence “irrelevant” from his point of view), unless in order to avoid incommunicability it inadvertently gives rise to structures similar to those it strives to avoid.

10.3. In May 1968 Karlheinz Stockhausen wrote: “Play a sound | Play it for so long | until you feel that you should stop || Again play a sound | Play it for so long | until you feel | that you should stop || and so on || Stop || when you feel | that you should stop || But whether you play or stop: | keep listening to the others || At best play | when people are listening || Do not rehearse”. This text is called *Richtige Dauern (Right Durations)*. It is the first in a series of fifteen, that together constitute the score for the cycle of intuitive music *Aus den Sieben Tagen*. No notes are written, no tempi given, no instruments indicated. Nobody nothing. There is just the text, and a suggestion as to the possible ‘cast’ for a performance (in case of *Richtige Dauern* this is “for circa 4 players”).

10.31. The text of *Richtige Dauern (Right Durations)* provides a concise description of what both auditors and performers will immediately recognize as a possible (class of) free improvisation(s).

10.32. Stockhausen used the term *intuitive music* to avoid the association of performances of his ‘text compositions’ with *improvisation*, which he thought of as being necessarily tied up with a certain style, hence can never become totally free and intuitive, for which “[the] musicians must be influenced by the supra-consciousness [...], by something which enters into them.”<sup>13</sup> Stockhausen claimed that such an intuitive music could not be but totally new. It would transcend the structures of any known and accepted musical form or style.

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<sup>13</sup> From the transcription of a discussion following a lecture by Karlheinz Stockhausen on Live Electronic and Intuitive Music on November 15th, 1971, at the Institute of Contemporary Arts in London.

10.321. As with respect to *all* of his work<sup>14</sup>, Stockhausen stressed the supposed cosmic origin of this music (which in the case of the text compositions – after due training and preparation of the musicians – would reveal itself *directly*, that is, without a composer acting as an intermediary). It seems clear though that from the point of view of the performer, the involvement in intuitive music will be much like that in free improvisation, the difference residing in the prior guide and mind state provided by the text-as-score.

10.3211. This intuitive music thus reveals itself as what one might call ‘guided free improvisation’. It is actually not too uncommon for groups involved in EAI to occasionally adhere to some set of ad hoc ‘rules and/or indications’, agreed upon prior to a performance.

10.322. Intuitive music and free improvisation touch common ground in the ideals of a non-conformance to any traditional/known musical framework or style, and that of the attempted *exclusion* of the performer’s *ego*, which is seen as a *sine qua non* for the possibility of reaching a reference-free state of playing. To play intuitive music “musicians must learn to become the opposite of egocentric,” Stockhausen said, “otherwise you only play yourself, and the self is nothing but a big bag full of stored information.”<sup>[MAC]</sup> Also in free improvisation a formal characteristic is, that in ensemble playing the players at no instance during a performance are supposed to assume a ‘leading role’.

10.3221. French double bass player Jean Bordé observed<sup>15</sup> that by taking the lead during a ‘free improvisation’ the instrumentalist is making a direct reference to *free jazz*. Hence she violates the dictum that in free improvisation a player’s playing should *not* refer to any other, known, music or style. “One is not, for instance, supposed to do a ‘walking bass’ ... there should not be any hint whatsoever at melody in your playing ... one should avoid a continuous beat ... and so on ... Your freedom is, so to say, pretty strictly watched over. *C’est de l’improvisation en liberté surveillée ...*”

10.3222. The tacit prohibition of reference to known/traditional musical styles implies that, like *pure* sound, EAI as a discipline tends to be *auto-referential*.

10.3222. Notwithstanding this ‘fear of the instrumentalist for overt musical reference’, within EAI the use of referential pre-recorded sounds, as well as that of musical quotations / samples taken from recordings (vinyl records, magnetic tape, digital media), forms a not uncommon ingredient.

11. Though it undoubtedly has – whether incidentally or systematically – been practiced before, as a named style of (improvised) music *free improvisation* began to develop in Europe and the United States as of the mid 1960s. Among its early initiators we mention

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<sup>14</sup> “The music itself is a manifestation of spirit in this world, of spiritual forces. We all, composer as well as interpreters, have to serve this music, and we should be ... humble ... towards the music, and we should never draw the attention to us. But always to the music. Because we have not made the music. We are only, eh ... inspired. But it comes from somewhere else. It comes from, really, from higher worlds. From intuitive regions,” Stockhausen told us. (Interview for *Vinyl Magazine* at the Royal Conservatory of The Hague, the Netherlands; november 24th, 1982)

<sup>15</sup> \_Personal communication, october 2007.

saxophonist Evan Parker and the british improvising group AMM, both of which may also be counted among the first practioners of EAI.

11.1. Several of the early practitioners of EAI had acquired – as students, as assistants, as interpreters, as composers – an intimate knowledge of the many theoretical and practical techniques *en vogue* in the academic musical avantgarde of those days. Others came to free improvisation out of a combined involvement in free jazz and the Fluxus art movement, notable for its blending of media and disciplines and itself deeply inspired by the divers concepts explored by John Cage in his work of the 1950s.

11.2. Guitarist Keith Rowe, one of the founding members of AMM, had an art school background, and initially the group started in 1965 as a series of ‘weekend experimental workshop sessions’ at the London Royal College of Art, open both to musicians and ‘observers’. “We were visual artists who also played musical instruments,” Rowe recounts in an interview from 2001. [<sup>WAR</sup>] “We wanted to move on from what jazz was about. We were inspired by what black American musicians had done, but we found the jazz form terribly limiting. AMM was based on a philosophy whereas free jazz was based on performance of music.”

11.3. Particularly Rowe’s – almost casual – remark that AMM “was based on a philosophy” – as opposed to “the performance of music” – is noteworthy, and we claim that indeed this *a fortiori* is true for EAI as it has been developing over the past decades. Though a such *philosophy* will often remain largely unspoken and unarticulated, Rowe’s sentiment with respect to his and AMM’s art reflects and follows the tendency in postwar academic music that we mentioned earlier (9.4): to ‘break away from itself’, to ‘free itself from music’.

12. Music is a *language* in the sense that it is a means by which humans may – or may fail to – transfer *sense*. One may say of a piece or a performance of music that one *understands* it, even if it will prove impossible to faithfully transpose/translate its meaning into words.

12.1. “Music resembles language in the sense that it is a temporal sequence of articulated sounds which are more than just sounds,” Adorno observes in *Music and Language: A Fragment*. [<sup>ADO</sup>] “But music is not identical with language. The resemblance points to something essential, but vague.” Recent research nevertheless suggests that *formal* language theory and grammatical inference may be used to model specific musical styles as (formal) languages.

12.2. It is possible to isolate, de la Higuera, Piat and Tantini observe [<sup>HPT</sup>], “rules of well-formedness and typical sequences in the structure of musical passages, which vary according to musical styles, just like a verb can be in the middle or at the end of a sentence depending on the language.” To this effect they apply grammatical inference, in order to deduce grammars or automata corresponding to a given piece of music as a string of structured data. The inferred grammar then may be used to generate a language from which the data were extracted.

12.3. Inversing and predating this approach, several scientists-artists-composers have used the formalisms of formal grammar and finite automata to define ‘languages’ that then are

subsequently used to generate *a music*.

12.31. Occasionally one comes across the use of (transformations of) of sounds issued from such ‘generative techniques’ also within the context of EAI.

13. While, compared to other musical practices and especially from an economical point of view, remaining as marginal (*fringe*) as in its early days (mid 1960s), the practice of free improvisation has become relatively widespread, even though several of its early practitioners at times described the genre as a transitory one. Derek Bailey for example recalls (in part seven of *Improvisation* [<sup>BAI</sup>]) that in mid 1970s he had the feeling that “[l]ike some early 20th century ‘ism’ [freely improvised music] had run its course and would probably continue to exist, if at all, only as some kind of generalised influence.” Nevertheless, subsequent generations of artists, as of the late 1970s, have come to embrace and develop its practice, and continue to do so until this day.

13.1. One cannot but conclude that – if only for the individual performers involved – free improvisation (in general, and that of electroacoustic music in particular), does fulfill a *need*.

13.11. Within the practice of EAI one encounters groups that bring together – often within a same ‘ensemble’ – performers from a disparate variety of professional and/or educational backgrounds: from western academic music, improvised (jazz) music, rock music via visual (media) arts to engineers, scientists, poets, (fiction) writers, journalists, and other (musical) autodidacts. All of these individuals are driven by a *desire* strong enough to have them come out and improvise with instruments and sounds freely in front of (a) (whatever) (small) audience(s); they seek out and team up with other improvisors prone to a similar urge and form *ensembles* that – often in variable geometry – continue to perform over extended periods of time.<sup>16</sup>

13.2. The genesis and the continued prospering to this day of EAI are closely related to the cross-overs between ‘high’ and ‘low’ culture, between *jazz*, the postwar *academic* musical avant-garde, *pop-art*, *rock-* and *pop music*. This *rapprochement* had an especially strong influence on pop music, and resulted in the subsequent penetration of a successive series of youth subcultures by many of the non-traditional forms and sounds invented and used in, for example, *free jazz*, *musique concrète* and *electronic music*. It was (and *is*) largely through their integration and reinterpretation in (experimental, progressive) rock- and pop music that idiom derived from such genres became an integral part of the cultural background and ‘vocabulary’ of successive ‘next generations’.

13.3. In the history of pop music, between 1960 and 2000 there are two evident and clearly distinguishable periods of intensive and frantic experimentation. The first one may roughly be dated between 1965 and 1969, when pop musicians started to take control of the recording studio and its equipment<sup>17</sup>. (Note that his period corresponds quite precisely

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<sup>16</sup> \_We will provide a more detailed description and analysis of the different aspects of the ‘creative urge’ leading to become active as a practioner of EAI later in this series.

<sup>17</sup> \_Well-known exponents include *Beatles*, *Beach Boys*, *Velvet Underground*, *Frank Zappa*, *Soft Machine*, *Grateful Dead*, *Pink Floyd*. Lesser known but highly influential were Joseph Byrd’s *United Stated of America*, David Vorhaus’ *White Noise*, and the Krautrock ‘movement’ with as its early exponents

to the one which marks the genesis of free improvisation as a genre.)

13.31. Martijn Voorvelt [VOO] distinguishes five elements that characterized and spawned the development of ‘experimental pop music’ in the period 1965-69: the growing influence of art schools on pop musicians; the psychedelic youth subculture; the discovery by pop musicians of ‘the power of destruction’ and the possibilities of using noise, and loud and ‘ugly’ sounds; the invention of the Moog synthesizer; the growing use and influence of improvisation within the context of pop music.

13.32. Voorvelt’s dissertation has as its principal subject the second ‘experimental explosion’ (as he calls it) in popular music, that of *post-punk experimental pop music*, which occurs between 1977 and 1983.<sup>18</sup> We may succinctly describe post-punk as a movement akin to *punk* in spirit while transcending or discarding its ‘substance’. [VOO]

13.321. Central to its rise and development were a new attitude towards (pop) music and its production, independent from major record companies. As of the late 1970s multitrack recording and related studio equipment became ever more affordable, enabling musicians to set up their own, more or less professional, recording studios. Hence post-punk musicians readily adopted punk’s DIY (‘Do It Yourself’) ethos, and pursued artistic independence through a world wide network of independent record labels (in size ranging from small to smaller to very small), distributors, magazines and specialist record stores. Several authors observe that the ‘democratization of media production’ in this period had important aesthetic consequences, as with the sudden boom of labels and small, specialized shops came a need for ‘diverse and innovative forms of expression’. Thus ‘musical experimentation was positively encouraged’, instead of merely ‘tolerated’. [VOO]

13.322. Far from being a single definable style, in post-punk experimental pop music we find combined a great diversity of attempts at obtaining ‘alternatives to the dominant languages of mainstream (popular) music’. As we already mentioned above: one of its principal merits is undoubtedly that it has enabled a next generation to internalize, adopt and adapt much of the idiom of post-war academic music in a non-academic context.

13.323. Voorvelt roughly distinguishes five separate ‘sub-movements’ in british post-punk experimental pop.<sup>19</sup> Several of these share, be it in often radically different manners, a focus on the recording studio and its equipment as an instrument and creative tool, including, for example, the use of tape loop- and collage techniques<sup>20</sup>. Often (parts of) the

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*Tangerine Dream, Amon Düül, Can* and in their wake bands like *Kraftwerk, Faust, Neu!* and others, which in turn had an important impact on the second period of extensive experimentation in pop music, which was roughly between 1977 and 1983.

<sup>18</sup> The United Kingdom undoubtedly was the center of ‘experimental pop music’ in those years, but at the same time the ‘genre’ flowered also elsewhere in Europe and the United States.

<sup>19</sup> As a related movement Voorvelt mentions the development in this period of a british version of minimal music, with composers such as Gavin Bryars and Michael Nyman that began working in a repetitive style with clear pop characteristics. The american minimalist movement, whose origins date back to the late 1950s/early 1960s, and among whose exponents one finds for example La Monte Young, Philip Glass, Terry Riley, Philip Glass, Pauline Oliveros, Phil Nyblock, Tony Conrad, Charlemagne Palestine, had a great influence on the american – and more specifically the New York – version of post-punk experimental pop music.

<sup>20</sup> Some early exponents are *This Heat, Wire, Cabaret Voltaire, Pop Group, PiL, the Raincoats, Art Bears, Red Crayola ...*

(collective) creative process (are)(is) approached in a highly conceptual way, which is reminiscent of Keith Rowe's remark (11.2) that "AMM was based on a philosophy" rather than "on the performance of music"<sup>21</sup>. Another characteristic, is the readily integration – either 'straight' or 'subverted' – of the many (analog) electronic 'music machines' (synthesizers, drum machines, sequencers ...) that during this period become commercially available.<sup>22</sup>

13.324. Evolving from a performance art group called *COUM Transmissions* that already had been active since the late 1960s, *Throbbing Gristle* and their Industrial Records label provided the name and the outlines for much of the low-fi, cut up, collage and noise formats that subsequently were developed<sup>23</sup> and became known as *industrial music*.

13.325. Many of the newcomers to post-punk experimental pop had an art school background, and the movement kept strong ties with the squatters' communities that at the time were firmly established in many European cities. These often provided not only for residence, but also for work- and performance spaces. Thus the majority of the movement's exponents share outspoken left-wing political views, ranging from relatively moderate to extreme.

13.4. EAI as it is currently practiced finds much of its roots precisely in this period, and arose and developed from within some of the factions that can be distinguished in the movement of post-punk experimental pop music. An important example is the faction of groups and artists allied with (the diverse members of) *Henry Cow* and the related Recommended Records, an independent record label and non-commercial record distribution network that was launched by Chris Cutler in 1978. After *Henry Cow*'s demise and that of follow-up projects in 'group' format, the ex-members and their many associates start an increasing number of cooperations with musicians involved in free improvisation from all over the world, which over the years has grown into a loosely connected but large and flexible international network of improvising musicians.

13.5. "In the 1990s," Voorvelt notes in his discussion of the repercussions of the post-punk experimental pop music from the period 1977-1983, "the international network of improvising musicians is arguably the largest, most prolific and most innovative music scene." [V<sup>00</sup>]

14. By its very nature free improvisation in general finds itself part of the oral tradition of music. In the absence – a *necessary* absence – of any but a *negative* demarcation of its contents, and the absolute primacy of *sound* as EAI's *subject matter*, all which concerns it, will essentially be passed on from *ear to ear*. One might even want to argue, despite seemingly contradicting its specialist and – possibly – elitist nature, that EAI must be considered a kind of *folk music*.

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<sup>21</sup> \_Examples might include *Wire*, the American *Red Crayola* collaborating with *Art & Language*, the Dutch *The Young Lions* ...

<sup>22</sup> \_E.g. *Cabaret Voltaire*, the Dutch *Minny Pops* (whose name in fact stems from 'mini pops', a rhythm machine that was manufactured by Korg), the American duo *Suicide* ...

<sup>23</sup> \_A development which for an important part took place as part of the world-wide *cassette-culture* that originated in Europe and the United States as an offshoot of the mail-art movement and the large-scale experimentation in the heydays of post-punk experimental pop. [J<sup>AM</sup>]



14.1. As the listening to / playing of any other piece of music, also an EAI performance must be considered as a process in the course of which the performers – who together may be seen as the generating grid – produce sounds that are interrelated, acoustically and/or chronologically, just as the performers are themselves intersubjectively related. The generating grid forms a dynamic network that evolves *in time*. (Following Iyer's [IYE] we here adopt Smithers' distinction between processes that occur *in time* and those that exist *over time*. *In time* processes – like (free) improvisation – are *embedded* in time, as the time taken by the improvisation in fact does contribute to its overall structure.) Each of the performers, as well as each of the auditors, will superpose this evolving sonic network with a lattice of (contingent, accidental, necessary, past and anticipated) meanings. This superposed lattice is inherent in the perception of the performance-as-it-evolves, and will be largely private (15.11).

14.2. Iyer has convincingly argued that “music perception and cognition are embodied activities[; ] they are actively constructed by the listener, rather than passively transferred from performer to listener[, and] depend crucially on the physical constraints and enabling of our sensorimotor apparatus [as well as] on the ecological and sociocultural environment in which our music-listening and –producing capacities come into being.” [IYE]

14.3. Contrary to the auditors though<sup>24</sup>, each of the performers has the possibility to willingly modify the evolving network by superposing it with a third network: that of her intentions. These intentions (which may or may not be perceived/perceivable by the others) may concern the sounds that he/she has produced, that he/she is about to produce, or the sounds that he/she intends to produce later on in the performance; they also may concern the sounds that (one of) the other performers (has) have produced, or the sounds that she/he presumes (one of) the other performers is about to produce, or will produce later on in the performance.

14.4. In parallel work we study the layered occurrences in EAI of *feedback loops* and related non-linear phenomena, forcing the continuous return of a signal to its source and resulting in its unceasing re-*place*-ment. [FS2]

14.41. It is indeed common for actors in EAI performances to make instrumental use of sound generating processes that, in one way or another, involve concrete acoustic or electronic feedback and related interferential phenomena.

14.42. More abstractly, also at the macro-level, with respect to (parts as well as) the overall time-dependent structure and evolution of a performance such feedback processes can be identified. It is possible to interpret an EAI performance as an *autopoietic machine* in the sense of Varela and Maturana. [VAM]

14.421. Practitioners of EAI tend to describe their *in-site* experience of what they consider to be successful performances in terms of the ‘spontaneous’ emergence of a sonic tension from within the (*presence* or *absence* of) sound material, which sets in motion an in time evolving process that will need little subsequent steering, when, as if by necessity, it unfolds towards some definite ‘goal’, that acts as the tension’s resolution. This sense of a

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<sup>24</sup> \_Excluding, of course, deliberate actions on the part of (a) listener(s) intended to disturb a performance.

‘dramaturgy’ as an intrinsic quality of (‘good’) EAI performances is an experience that appears to be shared by performers and auditors alike. It is the outline of a such development that (in most cases) appears when shortly after a concert performers and/or auditors are asked to briefly reconstitute (either in words or graphically) from memory the performance that they have just heard. Both performers and audience tend to memorize the overall structure of a typical EAI performance in terms of a series of successive *tension / release* pairs.

14.43. The overall structure of the performance is an *emergent* structure, not determined by any of the performers individually. It is a pattern that arises from a manifold of interactions that are relatively simple by themselves, the contingent result of a joint action consisting in an evolving series of individual *in time* choices that modify divers parameters of a complex dynamic system.

14.44. It seems feasible to study such dynamics systems formally, using a notion of overall complexity that is the weighted sum of the complexity of components, and where an individual performer’s actions as part of the whole may be interpreted as either striving towards maintenance of the current overall complexity of the performance, or aim at initiating a transition to a state of different (significantly higher or significantly lower) complexity. [<sup>BOG</sup>] State transitions leading from *high* to *low* overall complexity typically will correspond to the experienced *tension / release* pairs mentioned above (14.321). We stress though, that states of *high* or *low* complexity do not necessarily correspond to traditional low/high opposites in *musical* parameters, as the measured complexity will be context-dependent, so that, for example, an *open* and *soft* sounding passage may be seen to be of *high complexity* within the context of a given performance, whereas in that same performance an extremely *dense* and *loud* passage is measured as being of *low complexity*. It is very well possible that acoustically similar passages come to be measured as being of the opposite complexity in a different performance, or as being of more or less equal complexity in yet a third one.

15. Ephemerality is an integral part of the nature of improvised music, which, within a certain space, as a sonic flow is gradually taking shape *in time*, while becoming the *retention* of a (musical) structure: in its completed form it does exist as memory only. Paraphrasing Joseph Goguen’s summary of Husserl’s notion of the subjective perception of time [<sup>GOG, HUS</sup>]: the music as it is created in the process of free improvisation (i.e. ‘that which is sounding’) is solely – *can* but be – experienced in the present (the *now*), both by performers and auditors (the *participants*). Its *Gestalt* is thus taking (a partially private) form in each of the participants’ memories: <sup>1/</sup> through a continuously updated *retention* of the sounds that are themselves part of the continual ‘sinking away’ of subjective time (that is of the *sounds*’ flow)<sup>25</sup>; <sup>2/</sup> through a superposed lattice of perceived *meanings*; <sup>3/</sup> through the interrelations as they are perceived and/or retained by the performer/auditor;

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<sup>25</sup> \_We claim that when listening to and/or performing music, or when being cognitively involved in whatever other process that is occurring *in time*, our subjective time actually is *isomorphic* to our experience of that *in time* process.

<sup>4///</sup> and together with regularly updated *expectations*, in anticipation of what will come next (*protention*).

15.1. Sounds and their grouped sounding ... simultaneous (vertically clustered) or in order (horizontally spread), accidental or intended ... they will always point to something beyond themselves by reminding us ... of someone, somewhere, sometime; by contrasting themselves ... with something then, with something there ... Cf. [AD<sup>DO</sup>]

15.2. We claim that the generated lattice of perceived meanings (15<sup>2//</sup>) is an integral part of the cognitive process of perceiving sounds *in time*, even though a participant may not be able, or be only partially able, to articulate the meanings perceived. The lattice of meanings is largely personal (private) and context-dependent: perceived meanings will differ according to personal history, race, nationality, sex, age, education, professional experience, skills, companions, musical preferences, prior musical experiences, lightning, implicit social beliefs, spatial location, health, time of the day, nature of relation with other participants ...

15.22. The lattice of perceived meanings is essential to the participant's *interpretation* of the music.

15.3. In what at first seems to be a somewhat curious wordplay Adorno states that, while "interpretation is essential to both music and language", they are so in different ways: "[t]o interpret language means: to understand language. To interpret music means: to play music." [AD<sup>DO</sup>] Now of course to Adorno music foremost is: *notated* music. In which case by 'interpreting music' he will actually mean: 'interpreting a *notation* of music'. The 'notation of a music', though, is not the 'music'.

15.4. But then does it not make sense to 'understand' music? We claim that, as in the case of a language, one also arrives at an understanding of a music by 'interpreting' *it*, and that the 'difference' pointed out by Adorno is less of a difference than his little wordplay suggests.

15.5. The problem of 'understanding' music is closely related to its 'meaning'. Understanding music, i.e. interpreting *it*, means: articulating its *meaning*, that is: *articulating* the (retention of the) content of the perceived lattice of meanings that was constructed in the course of the process of listening.

16. Ephemeral as it may be at the time of its coming-into-being by be-coming-retention, contrary to musics in former ages that under comparable conditions were created and that could become available for others' listening at subsequent times only either through *repetition* and *re-creation* by the same, or as a *copy* (as an *interpretation*) by other musicians, it is possible as well as common practice to produce *recordings* of freely improvised performances.

16.1. Clearly, irrespective of genre or style: just as 'the music' can not be its 'notation', 'the music' is not equivalent to its 'recording'. The relation between music and its recording, though, is certainly less problematic in those cases where (other documentations of) the music exist as a 'completed whole' prior to the recording. This is always the case, unless the music is improvised. In case of improvised music that relation arguably is most problematic with respect to freely improvised music, aiming as it does

at an interplay of sounds that stays away (is ‘free’) from traditional stylistic contexts and connotations.

16.2. Cornelius Cardew states in *Towards an Ethic of Improvisation* (1971) [CAR]: “What a recording produces is a separate phenomenon, something really much stranger than the playing itself, since what we hear on tape or disc is indeed the same playing but divorced from its natural context. [ ... ] It is impossible to record with any fidelity a kind of music that is actually derived from the room in which it is taking place – its size, shape, acoustical properties, even the view from the window [...].”

16.3. Many practitioners of free improvisation seem to share this opinion. And though equally many nevertheless do record their performances, and on a regular basis distribute and make such recordings publicly available, these are but seldomly considered as *works* in a traditional sense.

16.4. In discussion with performers active in free improvisation, it becomes clear that the situation is indeed even far more complicated than as suggested by Cardew’s remarks above (16.2): hardly ever will it happen that the performer’s ‘impression’ derived from listening back to a performance’s *recording* corresponds to her ‘impression’ of the performance as a retention.

16.5. Though obviously when listening back a player will recognize the overall structure of the music as it was performed, and intimately *know* and recognize many of her personal (re-)actions over time, the perceived relations have changed, and it is not unusual that a performer actually expresses *surprise* as to what she ‘discovers’ in the recording. The experienced ‘surprises’ moreover often appear to be different for different participants in a same performance. The ‘three layered model’ of perception of the evolving sonic network in the course of a free improvisation (14.1-3) explains this interesting phenomenon.

16.51. The (embodied activity) of ‘listening back’ indeed now places the performer in the role of an *auditor*, whence the evolving sonic network will no longer include the superposed third layer of the performer’s intentions (14.3). We claim that the *absence* of this third layer accounts for the important differences between ‘in-site’ and ‘listening back’ experience by freely improvising performers with respect to their performances.

16.6. It is a verifiable prediction of our ‘three layered model’ that a participating *auditor* will report a far closer correspondence between the experience of listening back to a recording of a giving performance, and her retention of it.

17. “When you play the music, *you* are the music,” Cardew writes. [CAR]  
But what after the playing has stopped?

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