

"Open Sound" - music as sound you can produce and modify.

Musical material and improvisational performance practices in experimental music after 1945.

Carl Bergstrøm-Nielsen 2007.

CONTENTS

PREFACE.....	2
INTRODUCTION	3
THE NOTION OF "MUSIC AS SOUND".....	5
THE TREATISE: EXPERIMENTAL IMPROVISATION PRACTISE AND NOTATION 1945-99. AN ANNOTATED BIBLIOGRAPHY (= CBN 02).....	15
THE TREATISE: SOUND IS MULTI-DIMENSIONAL. PARAMETER ANALYSIS AS A TOOL FOR CREATIVE MUSIC MAKING (= CBN 03)	21
THE TREATISE: SPROG SOM MUSIKALSK NOTATION. EN UNDERSØGELSE AF VERBAL NOTATION OG DENS FORUDSÆTNINGER MED SÆRLIGT HENBLIK PÅ STOCKHAUSENS AUS DEN SIEBEN TAGEN OG FÜR KOMMENDE ZEITEN (= CBN 04)	30
THE TREATISE: INTUITIVE MUSIC AND GRAPHIC NOTATION. TWO MUSICAL TRAINING DISCIPLINES WITHIN MUSIC THERAPY EDUCATION AND THEIR THEORETICAL BACKGROUNDS (= CBN 05)	33
CONCLUSIONS.....	34
LITERATURE.....	41

PREFACE

This text provides a theoretical framework for several of my writings.

The writings referred to were created at different times, but they share the background of my interest as a musician, composer, teacher and theorist in new improvisation practise. Each was written independently, out of a need to clarify the issues in question: which literature do we have at all about all this? What could a comprehensive theory of musical parameters be like? How can the different Stockhausen text-notated works be classified and what is special about language as a new musical notation?

Since 1983 Aalborg University has hosted my permanent teaching in free improvisation and related disciplines at the Music Therapy Education and has provided a stimulating context for both practise and reflection.

When quotations are not in English, they appear first in the original language followed by a translation by the present author into English, marked by [square] brackets. This does not apply to quotations from CBN 04, since author and translator is the same person here; titles and text from Stockhausen pieces are quoted from their official translations and so do not have square brackets either.

For the sake of convenience for the reader, reference to literature during this text is made to a list at the end, even if one of the treatises referred to is a comprehensive annotated bibliography including many of these items.

INTRODUCTION

As a meta-treatise, this text refers to the three treatises CBN 02, CBN 03, CBN 04 with the Appendix CBN 05 (see the literature list about these abbreviations).

Their common subject matter is the new kind of improvisation practise connected to experimental music after 1945.

CBN 02 presents the broadest viewpoint, a general bibliographical one. Examples of issues brought up here include: improvisation both within frameworks and as free improvisation, recent historic publishing practise (both written music, CDs, internet and various kinds of writings), the development of various new notations, the development of educational and therapeutic practises, reception history of compositions as reflected both in individual sources and in more general historical works, and general theory.

Parameter analysis is, by comparison, on a middle level of generalization and is treated in CBN 03. It is broad because it presents a view of the sound material which can be used both for investigating a very large repertory of music and as a tool for composers or improvising musicians. It takes the modern situation with its relativity as a basis. It covers a wide field of study by considering use of the parameters in various forms of concert music, contemporary as well as historic. Also, the specific treatment given in CBN 03 to quotation aspects of music serves to make the theory an integrative one - it is possible to account for how several kinds of music can interact in the creative process. Parameter analysis as presented here can be used in individual ways and from different aesthetic standpoints, and the number of parameter concepts is not regarded as finite.

Limitations also apply, however, to parameter analysis as described here: It focuses on material, not on structure. Structures and processes are certainly important, but their description is here left to the individual practiser. Also it is not always

well-suited for much traditional music due to the holistic and formal approach to parameters.

CBN 04 investigates language as a music notation form, exemplified by the two verbally notated collections comprising thirty-one pieces by Stockhausen, showing a strongly differentiated use of language. Comparative issues arise: what can one do with this special tool and what not - and what do we learn from historic forerunners to the modern use.

In the order of the texts set up here, there is a "zooming in" of methodical approaches: the very broad bibliographical one - the broad, general analytic one - and a study focusing on only one kind of new music notation and on analysis of a selected repertoire by only one composer.

The new improvisation practise is a general phenomenon of recent music history. The next chapter, "The notion of music as sound" seeks to focus on one relevant notion which has been brought forward by composers, musicians and music historians alike. In the context of this meta-treatise, this can only have the form of a short digression. It is nevertheless hoped it can contribute to creating a platform from where overview and reflection can be facilitated.

The following chapters will review and comment on the individual writings in the light of their common perspective.

THE NOTION OF "MUSIC AS SOUND"

The idea that the new music can be characterized by an expansion of its possible material into "sound" is common to both American and European tendencies. It can be seen as a common denominator for tendencies which were also greatly contrasting and in some cases even conflicting.

Of course, traditional music consists also of sound. But the modern idea may involve such things as

- other sounds
- more use of transformation possibilities between one sound and another

John Cage, founding pioneer of the Anglo-Saxon indeterminacy movement, devoted much of his writing activity to commenting on sounds and how they are musically interesting. In the first texts to report of his new aesthetic vision, he makes clear that it is a holistic one. In "Experimental Music: Doctrine" from 1955, he declares his interest in

"the observation and audition of many things at once, including those that are environmental ... inclusive rather than exclusive".

Here he also relates of his ear-opening experience with an anechoic chamber which was supposed to be

"as silent as technologically possible in 1951"

(both in Cage 1961 p.13). To his surprise he heard both high and low sounds and was informed that they came from his own nervous system and blood circulation. The non-intended sounds suddenly became just as prominent as the intended ones, and the experience lead to critical thoughts about common dualisms:

"If, at this point, one says, "Yes! I do not discriminate between intention and non-intention," the splits, subject-object, art-life, etc. disappear, an identification has been made with the material..." (ibid. p.14).

With a concise formulation he then states in the 1955 text "Experimental Music":
"For in this new music nothing takes place but sounds: those that are notated and those that are not. Those that are not notated appear in the written music as silences, opening the doors of the music to the sounds that happen to be in the environment" (ibid. p.7f)

In their compositions, Cage and other indeterminists often focused on strategies to make things happen which were unforeseen both to the composer and to the performer. This often implied strictly systematic endeavours exactly in order to become a sustained focus.¹

Barney Childs summarizes the assumptions of indeterminacy in a manifest-like way:

"1. Any sound or no sound at all is as valid, as "good" as any other sound.

2. Each sound is a separate event (...)

(...)

6. Traditional concepts of value, expertise and authority are meaningless." (Childs 1974).

Especially with the last statement in mind, this seems to hit a certain rebellious attitude of American indeterminate music well, even if the charming language of Cage's writings might have contributed to a certain acceptance in wide circles. Many of those involved in the New York school and related activities, including Fluxus, felt that the new aesthetic was not just about hearing new sounds, but also about describing and performing them in new ways.

In Europe, the expansion of music material into sound first became clearly apparent in electronic and tape music. Pierre Schaeffer's "musique concrète" which was first performed in public in 1948, had its point of departure in recorded, environmental sounds - exactly "other sounds" compared to traditional ones.

In serialist music of the fifties, the use of musical material seemed much more selective to begin with. Even so, implicit in its theory was the idea that musical

¹ A number of examples are scrutinized in Bergstrøm-Nielsen 1979; see also Bergstrøm-Nielsen 1986.

order could be applied to any sounding material. Thinking in parameters focused on the physical, acoustic properties of the sounding material and thus took the attention of the composer to the total universe of possibilities, even if there was subsequently a selective use of this in practise. And this use was highly individual for each work, so that very different areas might in turn be covered by a composer².

In serial theory itself there is thus also a holistic view of the musical material. For Denis Levaillant, its original vision was to set free all dimensions of sound - whereas traditional music writing limited itself to only a few. He states the following in his book "L'improvisation musicale":

"La grande force de cette pensée fut d'affirmer qu'existait en deçà de tout langage (subjectif) un fait sonore brut, dont tous les paramètres analysables évoluaient avec la même variabilité, la même puissance organisatrice, la même compétence formelle".

["The great power of this thought was to affirm the existence, outside of any (subjective) language, of a crude sound phenomenon, of which all parameters that could be analyzed developed with the same variability, the same organizational power, the same formal competence"] (Levaillant 1981, p.101)

This notion of "crude sound phenomenon" may be seen as referring to the serialists' focus on starting "from Scratch" or, rather, from what could be seen as basic elements. It is also well-suited for characterizing the new acceptance and appreciation of the sound phenomenon itself which Cage advocated for. It lies, as its author states, "*outside of any (subjective) language*". Applied to the serialists, it is a notion that deals with the visions and contemplative activities that precede compositions. And with the indeterminists, it is rather the goal to "portray" this phenomenon, bring it into sounding existence, and doing so from ever shifting angles.

² This matter is examined in detail in CBN 03.

Moreover, and importantly, the concept could also describe that which is the starting-point for improvising in a free form: there is simply the possibility of *sound* which can in turn be made audible and also transformed in all directions. This is why Levaillant discusses it in relation to free improvisation, the main subject of his book.

Levaillant underlines the importance of the non-dualistic and non-hierarchical character of the "crude sound phenomenon" view, which envisages a number of equal parameters. "Holistic" is also a relevant and more recent word describing this. For him, dualism and hierarchical elements of music practise are problematic, entailing a separation of those dimensions that cannot be rationalized and notated. Exactly such dualism is absent, following his line of thought, when improvising with the sounds. The "open sound" principle can be followed intuitively without having planned the journey before. And if one could have "anti-dualistic" and "anti hierarchical" music theory, it would no longer be necessary to leave some of the musical elements in the darkness of being inferior to the ones being object of rationalization. It could be possible to have a balanced view on the sounding phenomenon more close to the way we perceive it.

The Levaillant view of the "crude sound phenomenon" and of parameters having in principle equal importance which I employ here, has thus the rare quality of being well-suited for description of both composed and improvised music at the same time.³

Soon after the beginning of serialist electronic music, it began to feature many and differentiated shades of noises in addition to tones and clusters of tones - Karlheinz Stockhausens' *Gesang der Jünglinge* from 1956 and *Kontakte* from 1960 are examples. The electronic sounds in the latter work were organized into "'families" of instrumental sound: metal sound, wood sound, skin sound, metal noise, wood

³ It is important to not only look back and see parameter theory as connected to early serial music of the fifties. It also foreshadows later developments, and contemporary American uses of similar ideas should also indicate that not only "greater control" but also "greater freedom" is an option - see the Cole quotation below p.10.

noise, and skin noise" (Brandorff and La Cour 1975 p.82). This was done in order to create contact points between the electronic sounds and the manifold sounds of percussion, as well as those of the piano.

It seems to have become a common notion in the field of music history also with European writers that in new music after 1945, all kind of sound can be used for music. Thus Gieseler states in 1975:

"Alle akustischen Phänomene können musikalisches Material werden. Die Musikentwicklung hat das in den letzten zwanzig Jahren deutlichst erfahren lassen".

[*"All acoustic phenomena may become musical material. The development of music has made that abundantly clear during the last twenty years"* (Gieseler 1975 p. 33)]

And he then proceeds, logically, to describing

"Parameter als Teilbestimmung des Materials"

[*"Parameter as partial characterization of the material"*]

in the next section.

Schafer has illustrated the general expansion of musical material into sound and added a historical perspective. A coordinate system shows frequency horizontally and amplitude (loudness, in dB) vertically. In this way the total possible hearable area is demarcated - and there are four limits of this: under the threshold of the hearable there is silence, over the threshold of pain there is deafness. And under the lowest hearable frequency there is infrasonic sound, over the highest hearable there is ultrasonic.

Schafer has then drawn concentric shapes inside this demarcated possible hearable area. The smallest is *"area of renaissance music"*, a larger one is *"area of 19th"*

century orchestral music". From this, he has drawn lines with arrows pointing towards the extremes of the entire area. All frequencies and loudnesses are now possible in music - including, of course, popular music forms⁴. This model is simplifying because it only measures two selected parameters and does not account for the radical change away from tonality in new music. Yet it illustrates a general tendency in music of our time (Schafer 1974, chapter VI)

The new musical sound inspired to new ways of handling and modifying it. Elements such as melody, harmony parts and bass as well as a firm pulse were no longer a matter of course. Cole's observation reveals a crucial fact: *"Situations were thrown up in which the running of parts in exact timetables was no longer a strict necessity. It was the necessity of avoiding discord that made exact synchronization into a vital organizing principle. (In the same way - trains have to run to a timetable partly because they must not be allowed to collide. Make trains of soft rubber, and the timetables can be relaxed"* (Cole 1974 p.152). So, instead of a basically more homophonic structure as known from romantic, classical music or popular music, composers and improvisors had a choice. Use of timbre and polyphony could, for instance, become prominent instead and could appear, indeed, as more adequate⁵.

One tendency evolving as a consequence of the expanded material was towards forms of performance practise leaving more choices and co-creative activity to the musician. As Cole puts it, viewing the matter from the issue of notation: *"From the avant-garde comes the idea that notation can evolve in the direction of freedom as well as in the direction of greater control"* (Cole 1974 p. 151).

⁴ Schafer's graphics has not been reprinted here due to copyright reasons, but the above information should cover the outline of it.

⁵ Seen from the tendencies after 1945 focused upon here, twelve-tone systems of the Vienna school (Schönberg - Berg - Webern) appear as a transition phenomenon in which the hitherto dominant harmonic thinking was dissolved into vertical and horizontal tone-combinations having equal rights and being capable of transformation into one another. Focus on tones from the chromatic scale was still retained here, however. There were "open dimensions", rather than "open sound" in the present authors' sense.

In Europe, direct compositional control over the sounding result was generally considered more important by experimental composers than was the case in indeterminate music. However, the difference was of course not absolute - an American composer like Milton Babbitt worked inside traditional music institutions (which Cage did not) and employed methods comparable to the European serialists. And among those composers in favour of strict control and organisation of musical material, more "conventionalist" or "radicalist" attitudes could be found.⁶

The issue of "greater control" versus "greater freedom" is an important one. It is easy to find examples of extensive compositional planning and detailed, systematic work in the music of the fifties, both for electronic and instrumental music. But Cage's vision followed the intuition of the moment. And in Europe a movement towards a more intuitive practise came during the sixties - Stockhausens' two intuitive music collections are central examples which are treated in CBN 04. Confronted with the open situation of the new material several opinions were possible: one saying, as it were, "we must work hard to organize this" and the other "we can now allow for a playful exploration". This author believes that both ways of responding to the open situation are, epistemologically, ultimately connected⁷, but differences in historic tendencies existed and still do. In this paper and the treatises belonging to it, the way emphasizing the "playful exploration" are especially considered, since the improvisation tendency mainly springs from it.

"Strategy" may be a notion designating a characteristic new situation of compositional control, or the kind of control over the playing exercised by the improvising musician: there is a strict, constructive effort which may yet be limited to its purpose and which may change or disappear along the way.

⁶ Boulez' and others' views on the parameters of music are referred to in CBN 03 p.8 and might be labelled "conventionalist" because of the division into "primary" and "secondary" ones and the ensuing tendency to focus on well-known sound properties. Levaillant (1981) refers critically to this, seeing it as a contradiction to impose a hierarchy to the sound phenomenon (p.101). It is hardly a coincidence that Childs (1974) points out Boulez as an antagonist to the indeterminists. In comparison, Stockhausens' liking for exploring new territory, as already apparent in *Gesang der Jünglinge* from 1956, exemplifies the more "radicalist" attitude.

⁷ See Bergström-Nielsen (1979) p. 176f, dealing with the principal role of theory in experimental music.

In his general book on new music history, Brindle states that *"Improvisation, [is] already implicit to varied extents in indeterminacy, music of chance, and aleatory music"*. He also coins the word *"semi-improvisation"* here.⁸

In their published dissertations, Müller and Feisst discuss this aspect of recent music history. Müller uses the notion of *"indeterminate performance practise"*, including both indeterminate works by Cage, Brown and Wolff as well as Stockhausens' *Prozession*. It is, as he asserts, necessary to describe the specific forms of practise which involve the performer, in order to get an idea of what this music is like, and there remains thus, more than twenty-five years after the publication of the works he describes, a wide field yet for a great part waiting to be described (Müller 1994).

Feisst has done important efforts to fill this gap. She generalizes further - covering *"Indetermination, aleatoric, open form, experimental music, minimal, meditative and intuitive music"* (Feisst 1995, table of contents). Her work presents an encyclopaedic variety of relevant works and improvisation groups for systematic discussion - along with discussions of the notions mentioned. She maintains the designation 'improvisation' as a heading for all these forms, but not without mentioning the complexities and contradictions involved in using the term within the different areas.

"Open sound" is defined here as a view of music material as being radically open for ongoing explorations. There is no a priori limitation of possible sound material for musical use. And, in the absence of a compulsory harmonic system with its ensuing necessities of strict coordination, an infinitude of new ways of devising sound processes can be imagined.

In the texts of mine I shall deal with here, this will also be the case: improvisation-like performance practise is referred to with the word improvisation.⁹ And

⁸ the text is from 1975, even if reprinted later.

composition being open to co-creative activity and not fixing all details in the traditional way will be called open composition, or open works.¹⁰ Improvisation not connected to works or to explicitly formulated rules will be called free improvisation.

The following scheme sums up some important concepts mentioned above. In the "open sound" situation, there is a characteristic increase of individualization in works and compositional procedures. One could speak of both a new demand on the composers of analyzing and of a new freedom to let constructions have an ad hoc nature and thus of a new importance of strategy as a form of conduct, eventually with both composers and improvisors¹¹. - Free jazz, with its re-discovery of collective improvisation, is also an important resource. It has not been part of the focus of CBN 03 and 04. In CBN 01, a number of writings come from a jazz context which, as must be kept in mind, is familiar to many free improvisors, even though free improvisation has moved away from the jazz idiom as such.¹² - Free improvisation is defined here as music which needs no pre-arranging¹³.

⁹ For a discussion of the concept of intuitive music, see CBN 05, p.25f.

¹⁰ "Open composition" thus covers both indeterminate and aleatory, Anglo-Saxon and European tendencies.

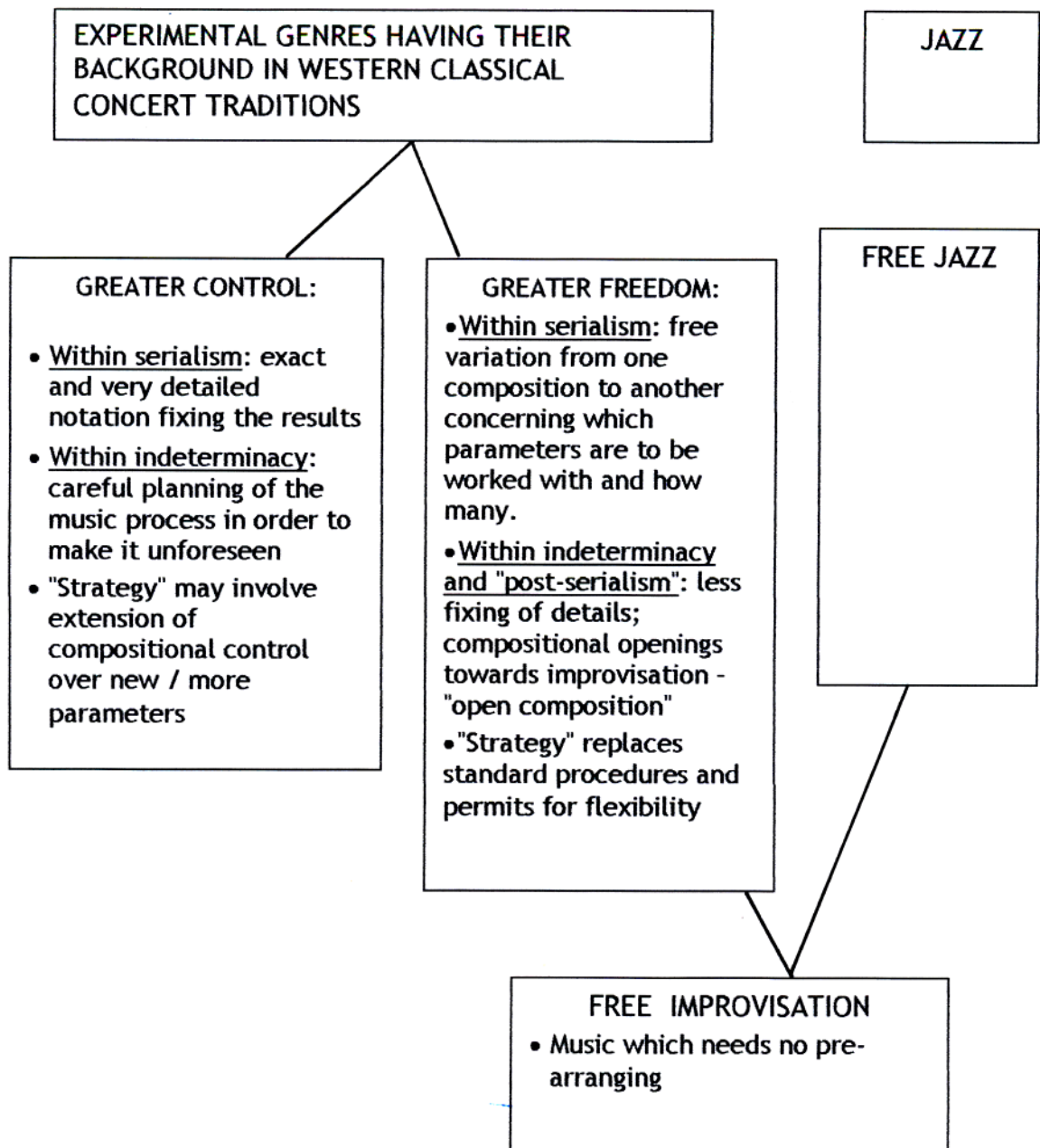
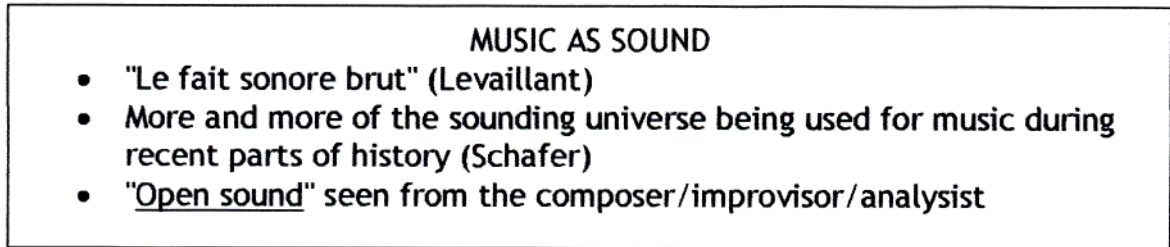
¹¹ The detailed notation of serialist works has been commonly noted. The individualization of compositions and compositional means present from the beginning should not, however, be overlooked.

¹² See especially these subdivisions under "G. Writings on improvised music": G1.1, G1.2, G1.3, G2.1, G3, G4 and G5. Special mention should be made of the authors Jost, Noglik and Wilson. It is a practical background fact that many musicians play both "normal" music which could be jazz, and the more experimental kind, at different occasions.

Western classical traditions provided a cultural "baggage" for recent experimental composers both in Europe and in the USA, and the experimental developments into a "music as sound"-situation described here can be seen on this background - one might describe relevant characteristics of this "baggage" as a norm permitting freedom for the individual and prescribing careful elaboration of the individual work. Jazz also had its "baggage". Investigations in this field might show that such things as "community feeling" and an improvisation tradition which could also be collective, are important factors. One thing having directly to do with "music as sound" is the importance of "dirty" sounds, "growl", "shout" in blues and use of clusters on the piano - an inclusive approach to timbral sound very different from "belcanto" tradition of classic music. See Mecklenburg et.al. (1963)

¹³ This is the general, typical situation in which improvisors work. It does not exclude that sometimes certain verbal arrangements are made and that individual ideas may sometimes be planned, but to a vast extent conscious activity will focus on creating the music along the way even in such cases, which are rather exceptions to the rule. And there is no explicit agreeing of "style" - in Derek Bailey's terminology which became widely accepted among improvisors, this music is "non-idiomatic". See CBN 02 p.96

MUSIC AS SOUND IN RECENT MUSIC HISTORY



THE TREATISE: EXPERIMENTAL IMPROVISATION PRACTISE AND NOTATION 1945-99. AN ANNOTATED BIBLIOGRAPHY (= CBN 02)

This annotated bibliography presents a systematic scan through published open compositions and literature that can be related to improvisational practise in the broad sense outlined in the preceding chapter - it will be called open composition here. It also undertakes a similar investigation with regard to free improvisation.

In this way, it seeks to go beyond generalizations, arbitrariness and the most well-known works and names, in order to make a more basic and more detailed mapping of available documentation.

General reference books and known special literature, their bibliographies, the references mentioned in such referred works with their references etc, systematic searches in major Danish research libraries including personal visits, strategic research visits abroad and contacts to a number of selected specialized libraries, available databases have been sources for this¹⁴. A large number of publications have been listed, studied and annotated - and presented in a system with categories and sub-categories.

In the field of composers with separately published works it seemed unrealistic to attempt to list all works. Instead, 130 composers have been identified and a list of their names including nationalities and years have been provided. However, a special list of anthologies and compilations is provided because of their strategic importance - both performers and educationalists will have easier access to choosing according to their need when many options at one place are available.

A4, aural scores, is a speciality of notation, but it is only connected to improvisation and open composition in those cases where improvisations are mapped - see H3.2 concerning this author's endeavours. Graphic representations

¹⁴ Detailed information on sources for each category of material have been supplied at the appendix section so as to demarcate as exactly as possible "how exhaustive" the lists can be considered to be.

appear useful in describing improvisations, words not being the only means available - the discipline of musical analysis has also since long made use of schemes, diagrams, etc. In individually published form aural scores are still a peculiar exclusive category¹⁵.

A problem of "minimum percentage rule" is discussed¹⁶, taking into account works not independently published and yet quoted in other publications. The quoting of unpublished material in articles and books invites the assumption that there must be a substantial amount of material having been created but not generally available and, seemingly, surviving into the stream of history both in the form of entire pieces quoted and in glimpses of various sizes. The existence of well-known and influential composers, such as Anthony Braxton and Danish Niels Viggo Bentzon, the open works of whom have remained unpublished points further in this direction and suggests that the "minimum percentage rule" problem does not just consist of a filtering out of some more or less imperfect or unimportant works, as must be regarded as normal, or maybe also of reluctance from the composers themselves because they may feel their works are still in a tentative state. One could also suspect the matter to be controversial itself both for publishers and others¹⁷.

The special literature on John Zorn (including CD releases), Anthony Braxton and the internet re-publishing of Brian Eno who continued the open compositions tradition beyond the sixties and seventies also testify to its vitality.

¹⁵ It includes such widely quoted and well-known items as Stockhausens' notation for *Studie II* and Wehinger's aural score for Ligeti's *Articulation*. At the same time, the list is strikingly short - only 9 items all in all - and one might speculate about reasons for this. The field might be so small because it is a speciality for study and education - it did not get over that which in my text is called the "minimum percentage rule" for commercial publishing (see the next note for an explanation of this metaphor). On the other hand, classical music has a strong tradition for the study of scores, for a certain philological approach to the works, and aural scores could be a great help when studying new works, both for scholars and educationalists as well as for listeners generally. One could also view this field as having a strong potential for new publishing initiatives.

¹⁶ This metaphor is derived from the systems employed for calculating how many members in the parliament various political parties will get after a vote. With various national differences, a certain minimum of votes is required for a party in order to get represented at all - having votes enough for one or two members is usually not enough. CBN 02, p. 14.

¹⁷ Exactly what are the causes and effects in this development could be object of further research.

Category E, notation, also points to extra-musical, sociological factors as the background for what is published and not. Here intensive, systematic efforts have been at work in describing new notation as a strictly systematic matter, continuing older practise in some technical details only, thus disregarding the historic reality of what composers actually did and their intentions. In this way, the tendency towards a different attitude to performance is veiled.¹⁸ From a number of other sources, however, it is possible to reconstruct this dimension.

Category F, by contrast, testifies to the success of the notion of music as sound in the field of music education. Weighty publishing series and periodicals are to be encountered here, and some authors have risen to great prominence with many and well-known publications. H3.1, literature on music therapy, further points to a successful use of improvised new music in a field appearing as related. Music therapy is, however, a new discipline growing up fast since the seventies with its own educations, its own research and regular congresses on world, regional and local levels. It may even appear more globalized because the interest in curing human problems can be perceived as more common and wider-reaching than music education, which may be regarded as tied to a higher degree to local traditions.

The re-discovery of improvisation practises in music education after 1945 points to an additional aspect of "open sound": when there is an infinite number of ways to create music, then logically "open sound" may also mean easy accessibility for educational target groups. It can be dealt with also without special training.

Turning to free improvisation and its documentation, it is worth noting how periodicals (G1.2 and G1.3) are a unique source of information on venues, festivals and their actual programmes, beside notes and articles related to ongoing events and even such things as the advertising from record companies. This is a source of

¹⁸ One is tempted to say that there has been an attempt to re-write music history in this respect almost before it was even actually written!

details for possible historical descriptions, and it has become more scarce since the internet took over around the turn of the century¹⁹.

However, in both G1.1, "General surveys and general history" and, to a higher degree concerning details in G2.1, "Documentation, reports and discussion concerning specific improvisors, groups, works, events, tendencies", the writing activity both in a reporting and journalistic form and in the form of scholarly products could be said to have reached a certain level of substance and conspicuousness. If one were to write a "history of new improvised music" or just a special study covering a part of the totality, there would of course be considerable areas with no documentation, but on the other hand there is much to draw upon - both concerning free improvisation and open compositions. The "G" category contains more than 265 entries.

In category G3, "General philosophy, aesthetics, music theory and music analysis", texts treating free improvisation prevails. Analytic activity concerned with open composition is also covered elsewhere (G1.1, G2.2, H1). On one side, it seems that free improvisation provokes thinking and philosophical activity with those who practise it, so that their texts flourish on both article and a large book scale. On the other side, even if free improvisation often leads a modest kind of "underground" life at its venues, there no relative lack of academic interest in it. In several cases, musicians known from concert life also write as part of academic studies or research and appear as authors²⁰. In the literature surveyed, there is a good participation from authors at "both ends" which appears as a fruitful situation. To be sure, free improvisation is not an object of study everywhere in the academic world of music studies. What is argued here is just that an impressive and useful amount of thought and research is already present. In G3, both a variety of general approaches of conceptualizing are discussed, and also several elaborate methods of analysis that coin new terminology for the description of the improvised process can be found.

¹⁹ See, however, note 27.

²⁰ This holds good for Lewis, Sarath, Stanyek and probably more authors.

G4, dealing with psychology, points to an interdisciplinary aspect following from the new sound material. Being outside of firm traditions, action does not take place according to previously defined systems - not even the overall focus of whether we are dealing with art or with other aspects of life is always perceived as given. Thus the following title of a special issue of a periodical reflects a genuine epistemological ambiguity: "*Improvisation - Haltung oder Handwerk?*" [*"Improvisation - Attitude or craft?"*] (Schwabe 1995).

The individual composers Stockhausen, Zorn and Wolff appear as a few examples, around whom there is a certain amount of special literature and substantial mention in various other sources to be found (G2.2, G2.3, G2.5).

The works in "plus-minus" notation of Stockhausen and those in verbal notation are weighty contributions to open composition. With the analytical special literature about them available today, it should be possible to arrive at a more exact and analytically grounded mention of them in music history contexts than has sometimes been the case, the discourse having been dominated by various polemic matters²¹.

Wolff is an important pioneer in creating new structures departing from habits of melody and accompaniment and instead becoming polyphonic dialogue structures - cf. the discussion around the Cole quotation in the preceding chapter, p. 11. With Wolff, there is less polemics, but the growing literature about him seems still recent enough to be waiting to be discovered in wider scholarly circles.

Zorn continues this way of working compositionally, changing its basis into a more pluralistic one. This was natural on his background as a free improviser, in addition

²¹ After the printing of CBN 02 for this edition, one more essential analytical treatment of *Aus den Sieben Tagen* has appeared, Kohl (1978)

to being a composer²². He thus combines insights from both essential components of the developments discussed here: compositional planning and free improvisational practise. One more experimental composer who has gained popularity through affinity to popular music contexts is Brian Eno (see the small, special internet category about his "Oblique Strategies" J1.2)

The Brown chapter (G2.4) deals not with his works generally²³ but with a single one, "December 1952", having become one of the most quoted open compositions of all, with its graphics of individual rectangles²⁴. Going into its history sheds light on the historic encounter between American and European tendencies at the Darmstadt 1964 meeting and its consequences and on the turbulence caused by new notations and performance practise generally. It also highlights the fact that performance and reception history assumes a life of its own. With new performance practise and a work with built-in ambiguity²⁵, this aspect becomes even more important than before.

At this point, it may be relevant to mention that the category A1 also presents examples - here they are of 13 selected individual works. They have each a list of writings referring to them - in both shorter and longer form. In this way, is illustrated how some well-known works are reflected in the literature.

H1, "General accounts of music history, dealing thoroughly with themes concerning new notation forms and/or improvisation" suggests that such literature is only a

²² In Mandel (1986), Zorn accounts for his wish to compose for improvisors, without being too prescriptive. This is an essential concern when dealing with improvising musicians. Demands are not just made "top-down" but the collaboration is, indeed, depending on a dialogue.

²³ - even though he could also be seen as a key figures in music history because of his encompassing of a large spectrum of innovative notational and compositional means, comprising both open notations as the one in question here, spatial notations and more traditional ones, which he used alternatingly in his works.

²⁴ The graphics are not reproduced here nor in CBN 02 due to copyright issues. You may, however, see it, for example, in Brindle (1975) p.89, Sutherland (1994) p.143 (frames not original but added by the author) or Bosseur (1979) p.45.

²⁵ This is to a special degree the case with the work in question. The instructions of the published score are of a complex, philosophical nature - at the same time, demanding to read and understand and letting several or many ways of interpretation open. However, the published score apparently has not even been known to many of those authors who has written about the work.

part of the total field, but one can note that points from where to start as a reader do exist in the form of books in both English, French and German languages²⁶.

The internet is posing a new situation for publishing and communicating. Availability of information has greatly increased, but on another note, historians may encounter difficulty because of impermanence problems in the majority of cases where permanent "virtual libraries" do not (yet) exist - sites may disappear suddenly, concert calendars may be updated so that previous information disappears, etc. There might, however, be technical solutions to this problem²⁷.

The lists of recordings (I1 and I2) have a "non-comprehensive" aim, furthermore the field is explosively growing. It can, however, be said that independent publishing, often on a small scale by the authors themselves, has changed the traditional picture and made a large variety of music available.

THE TREATISE: SOUND IS MULTI-DIMENSIONAL. PARAMETER ANALYSIS AS A TOOL FOR CREATIVE MUSIC MAKING (= CBN 03)

This study attempts a construction of parameter analysis as a coherent, yet open-ended system of analyzing musical material. This is done by tracing concepts historically, by reviewing theoretical literature and by exemplifying each parameter in my list with both historical works and newly created music ones from my own students.

Parameter concepts permeated both European and American experimental music from the fifties and on, even if the Americans could use a different terminology.

²⁶ The books by Brindle and Bosseur date back to the seventies but are, significantly, still available in reprint (April 2007) - Brindle was reprinted 1988, 1989, 1990, 1993, 1995 and Bosseur reached its fifth, revised edition in 1999.

²⁷ The search engine www.gigablast.com contains a "Wayback machine" which is capable of going many years back to older versions of a given page. This can be done through simply clicking on "older versions" in search results.

Apparently, the exactness of the term played a role. With its connotations to mathematics, physics, phonology, acoustics and electronic music, it was well-suited to the new anti-subjective aesthetic of the time.

This was indeed not just a matter of words and their connotations but very much a matter of how the composer could handle the material. Both romantic/expressionist and neo-classical aesthetics presupposed stylistic frameworks. With parameter concepts, as part of a more “open sound” orientation, there was a vaster territory to relate to, more ambiguity and more choices as to what to focus upon and how.²⁸

The definition of the concept of parameter is by no means uniform among the authors, and it is often encountered without any strict definition or theoretical explanation. Both broad and narrow definitions exist in those cases where authors have given thoughts to this matter. I have chosen to let only such parameters qualify which are variable in a continuous way. This makes possible a system which allows for infinitely different ways of organizing each parameter (in contrast to modal systems). This is in accordance with the aesthetic visions of both serialists and indeterminists. Following one definition of Stockhausen²⁹, it could be said to rely on a dialectic method of first contemplating the total possibilities and then choosing a way to divide the continuum, as far as the serialists are concerned.³⁰ And of contemplating systematic ways to explore new sonic land before designing the composition, as far as the indeterminists are concerned³¹. It also maintains the principle of undertaking a basic mapping of the fundamental medium of sound,

²⁸ Parameter concepts seem to be a terminology well-suited for descriptions of tendencies within music history. They appear less bound to only one tendency than those of 'aleatory' versus 'indeterminate' procedures which have different meanings the mixing up of which have given rise to considerable confusion. See Bergstrøm-Nielsen (1979), p.89f and Feisst (1997) - who devotes a long chapter to each tendency separately.

²⁹ CBN 03 p.7f - cf. also the following pages including the 1974 definition on p.11.

³⁰ See Stockhausen's definition, CBN 03 p. 8 and Gredinger's description of how to create “dimensions related to humans”, that is, choosing a measuring unit which also signalizes “the will to create a specific form”, p.11 (op.cit.)

³¹ See Bergstrøm-Nielsen (1979) documenting such systematic composition with Cage, Wolff and others.

even beyond the historic aesthetic views mentioned. It can thus be generally useful for describing music which relate to the “open sound” view.

Should my criterion for a parameter be so strict as Reinecke’s which demand that properties are always “mathematically describable”, this might limit the list too much to be practical. Density, in my pragmatic definition taken as simple polyphonic density (how many parts in play at any one time), may be expressed as varying integer numbers against a time line. But to determine when these numbers change, and to what, would require that one could lay down firm rules for what is “playing” and what is “not playing”, for how short pauses should be or what context they should have, in order to “count” or “not count”. Such determination is only possible through a musical analysis which again, ultimately, requires human interpretation and judgement. Some of the other parameters on my list would present even greater difficulty. I will, however, maintain that a continuum with its possibility of creating ever new intermediary steps should always be possible to imagine, and it should aim at description of the music itself. Therefore, some kind of operationally defining a way to measure parameter changes would become possible, but it could well rely on judgement that cannot be completely objective. Stockhausen’s parameter dealing with “understandability” of language could be one more example.

The question whether some parameters are more important than others has been debated. For traditional music, this could be said to be the case - pitches are for instance more important than timbres, since they carry harmonic information that could just as well be conveyed by other instruments. Given a totally “open sound” situation, there seems to be *a priori* no reason at all for assigning a smaller or greater importance to individual parameters, and Levailant also thinks so about his concept of the “crude sound phenomenon”. Boulez and Adorno have, however, argued that our previous experience play a role here (CBN 03, p.8f) - new experience must be made with that we are yet not used to, in order to arrive at new kinds of differentiation. Exactly this is also present in Stephan’s wise

statement that asks whether the new dimensions may *become* equal with the well-known ones.

Certain acoustical, physical realities undeniably exist - sound consists of vibrations forming specific patterns that can be measured physically. This provides us with a fundamental basis for describing sound. The interconnections between frequency, duration and timbre have often been referred to as a macro-continuum comprising several individual parameters, a “temporal continuum” with Christensen’s word (CBN 03, p.18). There is, however, a danger of following the acoustic system in a too slavish and mechanical way - both Christensen and Wishart bring forward considerations that take human perception into account and question the seemingly “natural” primacy of pure frequency.

Christensen views human listening abilities as a biological instrument for survival which leads him to pointing out that while a sine wave is apparently a simple phenomenon, timbre can in actual hearing experience appear more fundamental and primary because “*All kinds of sound are characterized by their timbre ... But only certain kinds of sound are characterized by clearly defined pitch height*” (quoted from CBN 03 p.18f)”. Among other arguments for regarding timbre as a no less important parameter compared to pitches, Wishart argues that spectrograms, as compared to oscillograms, are expressing equally “fundamental” properties of sound - based, as they are, on the same mathematical principle, Fourier transformation. In spectrograms, the dimension of timbre may appear more lucid and less aperiodic than in oscillograms.

Christensen and Wishart seem to do no less here than subverting the common idea about pitch having “a priori” a special superior status among sound dimensions.

Mention was earlier made of the greater ambiguity as to what the composer could focus on in experimental composition, compared to traditional ways (p.22). The concept of “network” from the serialists (CBN 03 p.11f) is an adequate word that retains this perspective: there is certainly a construction, but it is in principle

open-ended and may develop in different directions. It emphasizes the idea of the composition as an integrated whole. In so doing, it focuses on differentiation and tends towards abolishing dualisms between sound, process and form³².

Within the field of music therapy, some systems of psychological interpretations of parameter properties into psychological terms describing personality structure have been set up. Bruscia advocates for the existence of direct relations between parameter properties and psychological terms. Deuter presents a system which is to a higher degree open for individual interpretations.

Parameter analysis, as I use it and in the literature reviewed, deals with musical *material*, and provides no schemes for the description of structure. One could say, however, that relatively simple statistical patterns and developments of parameter changes are clearly well-suited for such description. And so the pitch patterns of traditional melodies may for example be difficult to circumscribe statistically - they are not especially well-suited for parameter analysis. But this analysis can of course be combined with various other ways of describing structure. One may also notice the holistic perspective in the parameter overview - many dimensions may be perceived and accounted for at one time.

³² The importance of differentiation and even sensual appeal in serial construction is underlined by a number of authors: Eimert and Stockhausen stated programatically in 1955 that "*the sound is not staying together like a rough mass but must be held together by a fine, tightly woven network*" (quoted in CBN 03 p.12). Essl (1989) states at the end of his article: "...Vereinheitlichung [von Material, Struktur und Form], wie sie in der seriellen Theorie gefordert wurde, liesse ein Ideal erträumen, in dem sich die Grossform einer musikalischen Komposition als Entfaltung eines einzigen, unendlich in sich differenzierten, komplexen Klanges darstellte" ["...unified character [of material, structure and form], as demanded by the serial theory, allows one to dream of an ideal, which would present the overall form of a musical composition as the unfolding of one single, in itself infinitely differentiated, complex sound"]. Erik Christensen quoted in Bergstrøm-Nielsen (2007) states (p.248 and 250): "Nuancering betyder alt ...Det, man opdager, når man improviserer med krop og stemme er, at der eksisterer et musikalsk kontinuum. Det er det samme kontinuum, som Estrada arbejder med - der er uendelige muligheder for at lave støj- og hvislelyde og toner med stemmen, et kæmpespektrum med enorm nuancering og forfinelse af udtryksmuligheder" ["Differentiation means everything ...Improvising with body and voice you discover the existence of a musical continuum. It is the same continuum which Estrada works with - there are infinite possibilities to produce noise sounds and whistling sounds with the voice, a giant spectrum with an enormous differentiation and refinement of possibilities for expression"]. Cf. also the example outside of music stated in the beginning of CBN 03 (p.4) of the "PH lamp" which, according to its inventor, was inspired by the idea of avoiding sharp boundaries between dark and light and thus achieving differentiation giving a more pleasant form of light - additionally, coloured parts inside it produced variation in the tones of light.

In the practical work with students at Aalborg University, compositions have been created which focus on specific parameters according to the individual composers' choice, preceded by exercises which train such focusing in improvised playing as a musician.³³ This has led to an exploration both of parameters that have traditionally been to a high degree codified, with pitch as the most obvious example, and of those for which formal models hardly exist, such as density and the degree to which a pulse can be discerned. In this way, we have taken an open starting-point similar to that of the serialists, but have employed an open composition method aiming at improvising musicians, more similar to that of "post-serialism". In order to make the perspective on parameters more comprehensive, descriptions of their use during music history has been given in each case along with a short list of examples from concert music.

Pitch features both melodic phenomena and how registers are used. Durations have often been focused on in contrasting sections with long and short ones - this is a simple way to employ statistical thinking transcending metrical patterns which is, yet, also well-known from traditional contexts. Dynamics are often used in an overall way, as a common envelope. This could be viewed critically as connected to the habit of homophonic thinking associated with the harmonic system - practical experience suggest that this parameter can have great importance for collective polyphonic texture, as is also suggested by a movement in a work by Ligeti. Timbre has in music history received intensive attention from composers in the form of instrumentation, and the symphony orchestra sound has been influential to our notions of music, even if this has remained closely connected to the craft of dealing with exactly these instruments and their combinations. In our open compositions this parameter has been the focus of compositions dealing with the sub-continuum of dark-light, and further sub-continua of hard-soft and tone-noise also exist.

³³ Students' backgrounds include a certain amount of previous training and improvisation skills in order to be allowed into the music therapy education at Aalborg University, but not on the level of a conservatory diploma. 1995 through approx. 2007, students have been given three block courses of each 10 lessons of intuitive music at 1. 3. and 6.semester.

Density, taken as polyphonic density (number of parts playing at any given time), has been found to have strategic importance for group dynamics. Directions regarding this can only be given to the collective. The individual player can, in any moment, only choose to play or not to play. These choices can, however, become informed by the process and influence each other, directly and also indirectly, and in this way, there can arise what could be called a collective self-critical attention and a collective inspiration.

Some parameters are especially relevant for dealing with the integration of traditional and new material. This is interesting as a kind of openness of a "second order". Music as sound may, as a discovery and as a historic tendency, imply that traditional stylistic rules are abandoned and instead there is a norm that "something else", outside of traditional syntax, takes place. But, in various collage-like phenomena of new music, quoting of traditional material has re-appeared. Here, however, the quoted elements appear now as informed by the more recent context. The semantic and philosophical implications of this have been the object of philosophies with composers like Ives³⁴ and Stockhausen.³⁵ They stress, each in their way, the perspective of integration of opposites.

To integrate opposites imply that some kind of difference or independent nature of each is recognized. There are also views that especially stress the importance of allowing conflict and of respecting differences. Thus, Beresford take attention to the important fact that historic change does not mean total change in all respects - as if we had passed through a door - but is an ongoing process³⁶. And Evan Parker coins a metaphor of "*cheese and pickle sandwich*" to describe his ideal, that

³⁴ See Bonnesen et al. (1984)

³⁵ See Lekkfeldt (1977) and Shimizu (1999)

³⁶ "I don't think we have gone through some door whereby we put behind us all the historical legacy of 20th century music, with chords and bass lines, I think we're stuck with it on some levels. ... The improvised music performances which don't work for me are those which are exactly trying to project an image of pure music which doesn't have the same problems that most music has and that most life has" - Toop et al. (1978) p. 22.

differences should enrich each other, not become merged and disappear³⁷. Likewise, Vinko Globokar states that an interesting, "*peculiar and unbalanced mixture of two worlds*" may appear. These last three statements were made by free improvisors and suggest that strong contrasts or even clashes between players playing in different ways belong to normal experience in this field³⁸. That which was to a higher extent singled out as a special collage phenomena within composed music becomes, in improvised music, more part of a common pluralist situation. This seems a special characteristic of the "open sound" situation within improvised music. Munthe (1992) makes this general statement: "*Single idioms are no longer regarded as prerequisites for the music making but as tools which can in every moment be used or not used*"³⁹

This "open sound" situation of free improvisation may thus entail a new vision of dialogue with the past - or, differently seen, with different musical idioms as they are cultivated on contemporary scenes⁴⁰. "open sound" may mean, in some cases, to negate traditional ways - in some cases also to re-integrate or comment on it.

Further parameters also related to the integration of old and new are 'pulse---no pulse' and 'tonal-atonal' which also often receive creative treatment in students' compositions.

³⁷ "There is a kind of tension to be maintained between total heterogeneity (where there is no cheese and pickle sandwich) and total homogenization where all identity markers are flattened out and we arrive at a kind of filtered 'new age-world music' pap. (Like a cheese and pickle sandwich in the blender!)" - see Stanyek (1999).

³⁸ "Zunächst klingt diese improvisierte Musik wie "zeitgenössische Musik", wenn alle anwesenden Musiker eine "zeitgenössische" Sprache sprechen ... Wenn zufällig in der Gruppe eine Person auftaucht, die nur Jazz oder indische Musik gespielt hat, ändert sich das Resultat von Grund auf. Es wird eine eigenartige und unausgeglichene Mischung von zwei Welten. Ich möchte gleich hinzufügen, dass die Unausgeglichenheit hier nicht zwangsläufig ein negativer Faktor ist"

["To begin with, this improvised music sounds like "contemporary music" when all the musicians present speak a "contemporary" language ... If, by incident, a person appears who has solely played jazz or Indian music, the result changes fundamentally. It becomes a peculiar and unbalanced mixture of two worlds. I would like to add instantly that the unbalanced quality is not necessarily a negative on J", Globokar (1972) p.67.

³⁹ (p.13 in the Swedish version).

⁴⁰ It has been a concern for European and especially German writers to maintain that the musical material is a witness of history and cannot meaningfully be regarded as something "neutral". This issue has been subject of a major controversy between European views and those of Cage. It also permeates the philosophy of Adorno (see for instance (1972) and (1973)).

The seemingly rather special parameter of 'degrees of contrast' originating within one of Stockhausens' composition could be demonstrated to be strategic for general design of compositions. Like could be the case with timbre and durations, this proves to be a formalization of something which has been at work in traditional music, too.

The chapter "Parameter treatment in the above examples" reviews how parameter indications and changes have been used for illustrative, program-music like purposes in students' compositions. This reveals a kaleidoscopic variety of different interpretations. Interpretations are not effective in terms of unchanging, semantic parameter properties, but in terms of the topics and their specifications in verbal titles, in other verbal suggestions and in illustrations⁴¹.

In some cases, attempts have been made to characterize parameters in a more general and abstract way which is called "perception mode", such as "change/stasis" applying to several ones.

Different parameter values may be used compositionally or in improvisation in order to differentiate - between individual parts, or between different sections of the process, each in its own way. This is even valid for pitch, the historically most codified parameter of all, which in some compositions appear as an abstract, neutral means of letting parts stand out from each other.

⁴¹ This finding contrasts Brucia's belief in the possibility of "direct translation" between music and psychological content. See above p. 25.

THE TREATISE: SPROG SOM MUSIKALSK NOTATION. EN UNDERSØGELSE AF VERBAL NOTATION OG DENS FORUDSÆTNINGER MED SÆRLIGT HENBLIK PÅ STOCKHAUSENS AUS DEN SIEBEN TAGEN OG FÜR KOMMENDE ZEITEN (= CBN 04)⁴²

This study analyzes the totality of 31 different pieces in the two verbally notated work collections of Stockhausen, *Aus den Sieben Tagen* (From the Seven Days) (composed 1968) and *Für kommende Zeiten* (For Times to Come) (composed 1968-70). In addition, it provides a short historic review of the use of verbal means as music notation. Verbal instructions to performers at the baroque period and later could concern tempo and, increasingly, other matters such as general characters and atmospheres, on the background of a commonly understood musical language. During the sixties, Fluxus artists and various composers could use language as notation throughout, and also Stockhausen used language as an auxiliary notation, both to designate precise shades of sounding material in *Mikrophonie II* (1964) and to more generally circumscribe what was to be played, in *Adieu* (1966).

A classification is presented which employs descriptive notions of

"konkret beskrevne forløbsstrukturer" / "concretely described process structures"

"billede" / "picture" (this means "metaphorical description")

"teater" / "theatre"

"komposition på den konkrete kommunikation i gruppen" / "composition dealing with the concrete communication within the group"

"komposition med bestemte meditationsteknikker" / "composition using specific meditation techniques"

and

"seriel opbygning, universet, svingninger, forskellige tidsplaner" / "serial construction. The Universe, vibrations, different time levels"

⁴² A German, much shortened version of this text, has appeared as Bergstrøm-Nielsen (1997) and a similar English one as Bergstrøm-Nielsen (2006)

Some of these categories appear also combined with each other.

The verbal means are used in different ways. In some cases, there is a relative "*fastlæggelse*" / "*fixing*" of elements or of what is to happen - as for instance, in the beginning of Unanimity: "*Play and/or sing / extremely long quiet sounds / and / extremely short loud sounds*". Opposed to this, there is the use of metaphors which may be "*metaforisk konkret*" / "*metaphorical-concrete*" like "*Play/sing as parallel with the others as possible*" or they may be "*metaforisk-poetiske*" / "*metaphorical-poetic*", like "*nocturnal forest with dialogues*".

Different from such metaphors which are ambiguous but still can be said to point towards a definable character of the resulting music, there are instructions which suggest musical phenomena but which leave a wide space open for individually different interpretations, for instance: "*play a vibration in the rhythm of the universe*". The result is likely to suggest something not-so-traditionally sounding, but is still very ambiguous - some musicians might for instance play very long sounds, others exactly the opposite, etc. In still other cases, music is to be approached with specific meditative preparations or frames of mind, which might motivate the musician, but does not imply any direct relation to the sounding result, for instance: "*play a sound with the certainty that you have an infinite amount of time and space*".

These four categories suggest a meta-continuum in the serial sense between unambiguous and totally ambiguous description - and the steps outlined here are described as "*fastlægge/omskrive/antydte/fremkalde*" - "*fixing/circumscribing/suggesting/evoking*". This is called a meta-continuum because it was not directly present in the playing directions but results from analytic interpretation.

Also the category of *"serial construction. The Universe, vibrations, different time levels"* features examples of continuum-, parameter-oriented thinking - from the element of *"the universe"* to that of *"your atoms"* with many degrees in between⁴³.

Stockhausen thus employs a highly systematic approach even in such seemingly "free" works. It also becomes clear that pieces differ greatly as to which kind of description of elements and structure that prevails and how they may be mixed together.

That which was called *"forløbsstrukturer" / "process structures"* in CBN 04, that is, structures that determine an overall shape or direction in time, a form, has not been fully categorized in the treatise. But from the tables it can be gathered that parallels to the description of single elements exist. Thus, the music of *"Wach / Awake"* is to follow a prescribed sequence of contrasting sections. *"Setz die Segel zur Sonne" / "Set sails for the sun"* has a defined goal which is to stand out from the rest of the piece, but there is no telling how direct or linear the development towards it will be. *"Nachtmusik / Night music"* lets musicians slowly transform one kind of element into another several times which will produce a certain character to the piece, but the piece does not determinate which sounding elements are presented in which sequence - both individually and collectively seen⁴⁴. Again we see the continuum idea at work, now with the same meta-continuum applied to the horizontal dimensions.

One category mentioned above was *"komposition på den konkrete kommunikation i gruppen" / "composition dealing with the concrete communication within the group"*. This is playing rules making the music dependent on a process taking place in the group (as, for instance in *"Richtige Dauern / Right Durations"* the individual feeling for how long tones should be and how it changes, as inspired by the playing context).

⁴³ This and other serial features have been noted by Blumröder (1993), Kohl (1978) and Essl (1989). More writings about these pieces to be found in the special category G2.2 in CBN 02.

⁴⁴ Additionally, there are four combinations of these two elements of playing rules described: *"retningsbestemt / retningsubestemt og foranderlig / uforanderlig - [goal-directed / not goal-directed and changing / unchanging]"*

From this analysis and from the outlook on other examples of words used as music notation in both traditional and experimental music it is suggested that language may well describe musical elements and processes in a concrete way, and various more ambiguous and indirect means of influencing the music with words also exists. The category of "*composition dealing with the concrete communication within the group*" show that conditions of the "if-then" type may also be imposed on the playing, something which is unknown to traditional notation and to traditional music forms⁴⁵. It appears, however, well-suited to a context of improvisation.

THE TREATISE: INTUITIVE MUSIC AND GRAPHIC NOTATION. TWO MUSICAL TRAINING DISCIPLINES WITHIN MUSIC THERAPY EDUCATION AND THEIR THEORETICAL BACKGROUNDS (= CBN 05)

This text serves only as an appendix which may make some details concerning my intuitive music teaching more clear. There is also a short chapter on "The idea of an 'intuitive music' " which presents and comments this special notion of Stockhausen and its relation to the more general concept of improvisation.

⁴⁵ The genre label "game pieces" may here apply. See the special chapter on Zorn in CBN 02, G2.3.

CONCLUSIONS

Improvisational performance practise is a part of twentieth-century music history and of developments extending into today.

To characterize a common situation after 1945 for experimental music tendencies, a notion of "*open sound*" has been introduced here. It denotes a view of music material with no a priori limitation of possible sound material for musical use, neither for how the process in time can be devised.

Such a view was common to both European and American experimental composition tendencies, despite of different and even opposed ways of music creation. The ongoing exploration could take place from the creation of one fixed work to another, from one rendition of an open composition to another - and, with the advent of free improvised music as an independent tendency, from a free improvisation to another one.

Whereas the "open sound" situation led to greater control over musical material and processes in early serialism and in certain aspects of indeterminacy, it led also within the very same tendencies, including that which immediately followed serialism, to greater freedom. This can be noted in the form of increased individuality of works and personal composition procedures in early serialism, and in the form of compositional openings towards improvisation and less fixing of details that became apparent in both indeterminacy and "post-serialism". Here, in the nineteen fifties and sixties, new forms of performance practise were born, made possible by the new views of musical material.

Serialist and indeterminate music became important historical backgrounds for free improvised music in which no pre-arranging is needed. Their emphasis on individual, creative strategies appears to be an important element in this process, and a further inspiration came from free jazz, which at the time of its emergence in the sixties, represented a re-discovery of collective improvisation.

CBN 02's bibliographical research reveals many individual details on publications and their contents. It also outlines those areas of activity where publication has taken place, both systematically and over time. And in so doing, glimpses of a sociological background can be seen.

Publication of individual, open compositions, as well as series and anthologies with them, took place primarily in the nineteen sixties and seventies as far as the large publishing houses are concerned. They were a novelty at that time and accepted by the publishers.

Simultaneously with the rise of new tendencies of composition in a restaurative direction, commercial publication of open compositions declined drastically. Open composition became a speciality cultivated by certain composers, among whom also were very well-known names such as Danish Niels Viggo Bentzon and American Earle Brown and Anthony Braxton, and their work in this field often remained unpublished. Quotings of their works (both in extenso or in part) in various literature can be seen as an indication of ongoing activity, together with certain remaining or newer publication initiatives. The special literature on John Zorn (including his CD releases) and Brian Eno also testifies to the vitality of open composition beyond the sixties and seventies.

"Open sound" may also mean easy accessibility for educational target groups. Open compositions for educational use and literature on how to teach improvisation practise have had a different, more lasting commercial career.

Despite the fact that much basic information needs yet to be collected both concerning open compositions and free improvisation, there is a lively publication activity commenting them, both books and articles. It appears that the field continues to arouse interest among scholars, who may in some cases also be part of the scene. Publication opportunities of such books seem to exist to a higher degree

than with individual works. Weighty categories include not only general accounts of those topics, in addition to the category of contributions with a more narrow focus, but also music philosophy / analysis, including elaborate works suggesting terminology and method of analysis, and psychology centering specifically around the playing situation of free improvised music. Also several general, commonly known, accounts of new music history which also deal thoroughly with the new improvisational practises exist.

The bibliographical investigation thus depicts both comparatively strong areas of documentation, knowledge and theory which future research and compiled documentation could build directly upon, as well as weaker areas which could benefit from more documentation and research.

The term of 'parameter' scrutinized in CBN 03 is highly characteristic of and suiting the "open sound" situation, since it will often suggest something not finite: be it in the possible use and the sub-divisions of one parameter, be it in the number of possible parameters for use, or both.

A number of narrow to very broad definitions exist. This author has chosen a middle way, demanding that parameters are always conceived of as a continuum which can in practise appear in different proportions. Considering the widespread use of the term there seems still to be a wide field open for comprehensive studies seeking to encompass several or many parameters in depth with general characterizations. This appears so, even if one assumes, like the present author does, that the number of possible parameters is not finite, and therefore, the field could never be exhaustively or even approximately covered.

Within the field of music therapy, some systems of psychological interpretations of parameter properties into psychological terms describing personality structure have been set up, employing different degrees of fixing the relationship and allowing for individual interpretations.

The parameters of pitch and timbre have, however, been discussed critically in depth by Christensen and Wishart. With totally different arguments they both advocate for a view in which timbre is considered no less important than pitch, contrary to certain traditional theoretical views.

Based on his own teaching activity with music therapy students at Aalborg University, a list of parameters has been set up. These are pitch, duration, dynamics, (polyphonic) density, pulse-no pulse, stylistic recognizability, tonal-atonal and degrees of contrast. They are each examined with theoretical discussions, quotations of student's compositions (in a total number of 32)⁴⁶ and mention of specific exercises and of concert music examples.

Students often address the "open sound" challenge by using parameters in untraditional ways, also sometimes using elements known from tonal music.

Density has proven to be of special importance for group dynamics. Stylistic recognizability, pulse - no pulse and tonal - atonal are especially relevant for dealing with integration of old and new material. This aspect, which could be called a pluralistic one, comes up with necessity within free improvised music and has been commented upon by several improvisors. When there is no agreement in beforehand on what to play, there must be acceptance of and ways to deal with possible stylistic clashes. There exists a wider philosophical perspective to this as well suggested by certain composers' philosophies.

Students' compositions reflect a liking for a program music - like approach to composition, but the examples commented on here suggest that such interpretations, while being able to create effective illusions also easily contradict each other - the sound material in itself may "mean" different things according to

⁴⁶ Four additional compositions which do not relate directly to parameters discussed have been discussed separately in appendix A.

the context. Interpretations rely mainly on the verbal and pictorial elements employed.

The compositions also exemplify the multi-dimensional nature of musical sound - several parameter changes may happen at the same time as well as over time, each of them having the capability of being independent media of differentiation. This is a common characteristic of music, but it rises to a new importance within the "open sound" situation with parameters having equal importance.

Verbal elements of music notation as an auxiliary device have played an important role since baroque times and were also previously explored by Stockhausen. The two collections of Stockhausens' verbally notated collections *From the Seven Days* and *For Times to Come* in CBN 04 comprise 31 pieces which were analyzed together. The pieces belong to series each having compositional procedures in common. These procedures may have to do with how concretely the music is described, whether the group interaction is made into a special theme, whether specific meditative approaches have been employed as the main approach of the piece in question or whether continua are presented as a special theme.

Looking at the way music material is referred to, they can be grouped into four categories according to how unambiguous or ambiguous the directions are, each category comprising a number of works: "*fixing/circumscribing/suggesting/evoking*". They fit into a meta-continuum as different degrees.

Processes prescribed for the improvised playing and form can further be exemplified, ranging likewise from, very concretely, a sequence of sections players must follow, over having a common goal defined but not exactly the way towards it, till having a formula to be employed by players independently, creating a polyphonic texture. There seems to be the same kind of meta-continuum applied also horizontally, in addition to the use of it observed earlier in the vertical dimension.

It emerges from this analysis that a highly systematic procedure has been employed for composing the pieces in the collections, that the verbal notation means employed describe the sound in a continuum of ways ranging from the very concrete to the totally ambiguous, that different degrees of ambiguity in the models of form and improvisation process prescribed also exist - and that verbal means are capable of exact description of musical elements. Generally, they seem, however, especially apt for describing in outline, both material and process. With verbal means, "if-then" processes become a new possibility for compositional use, opening up a new compositional field of dealing with polyphonic texture in a hitherto unknown, direct form of players acting immediately together.

The following scheme sums up some important points from all treatises in a short overview.

	<p>"OPEN SOUND"</p> <p>- A view of music material with no a priori limitation of possible sound material for musical use, neither for how the process in time can be devised.</p>	
	<p>OPEN COMPOSITIONS</p>	<p>FREE IMPROVISATION</p>
CBN 02	<p>- Numerous publications of individual works in the nineteen sixties and seventies. Indications of later activities by specialized composers in other sources.</p> <p>- Historic development is treated in certain general accounts of music history.</p>	<p>- Numerous writings being published continuously since the nineteen seventies, both general surveys and specialized documentation. Even the disciplines of general philosophy/analysis and psychology are covered.</p>
	<p>Common accessibility as an aspect of "open sound"</p>	
CBN 03	<p>- Parameter definitions</p> <p>- Theoretical thinking about parameters</p> <p>- The individual parameter as multi-dimensional aspect of "open sound"</p> <p>- Possible to set up parameters which deal with integration of old and new material (stylistic recognizability, pulse - no pulse, tonal - atonal)</p> <p>- 32 students' compositions as examples of creative accessibility of untraditional, parametric music thinking.</p>	<p>- The situation with no need of agreement between musicians creates a pluralistic situation entailing the necessity of dealing with stylistic clashes</p>
CBN 04	<p>- Analytical examination of Stockhausen's 31 pieces from From the Seven Days and For Times to Come</p> <p>- as examples of open composition, of serial, compositional thinking</p> <p>- as examples of the use of verbal notation</p>	

LITERATURE

This list contains only items specifically referred to in this treatise.

The other treatises referred to are those below. The numbers match the volume numbers stated on their front pages.

CBN 02 = Bergstrøm-Nielsen, Carl: Experimental improvisation and notation practise 1945-1999. An annotated bibliography (first ed. 2002). 2006.

<http://www20.brinkster.com/improarchive/legno1uk.htm>

CBN 03 = Bergstrøm-Nielsen, Carl: Sound is Multi-Dimensional. Parameter analysis as a tool for creative music making. 2006. [http://vbn.aau.dk/research/sound_is_multidimensional\(5365940\)/](http://vbn.aau.dk/research/sound_is_multidimensional(5365940)/)

CBN 04 = Bergstrøm-Nielsen, Carl: Sprog som musikalsk notation. En undersøgelse af verbal notation og dens forudsætninger med særligt henblik på Stockhausens Aus den Sieben Tagen og Für kommende Zeiten. 1998. http://www20.brinkster.com/improarchive/cbn_legno2.htm

CBN 05 = Bergstrøm-Nielsen, Carl: Intuitive music and graphic notation. Two musical training disciplines within music therapy education and their theoretical backgrounds. 1999.

[http://vbn.aau.dk/research/intuitive_music_and_graphic_notation\(85102\)/](http://vbn.aau.dk/research/intuitive_music_and_graphic_notation(85102)/)

Adorno, Theodor W. (1972): Philosophie der neuen Musik (first publ. 1958). Frankfurt (Ullstein).

Adorno, Theodor W. (1973): Ästhetische Theorie (first publ. 1970). Frankfurt (Suhrkamp)

Blumröder, Christoph von (1993): Die Grundlegung der Musik Karlheinz Stockhausens, Stuttgart (Franz Steiner Verlag).

Bergstrøm-Nielsen, Carl (1979): Undersøgelser omkring eksperimentbegrebet og eksperimentets rolle i vestlig kunstmusik efter 1945. MA thesis, University of Copenhagen. Manuscript.

Bergstrøm-Nielsen, Carl (1980): Debatten om seriel musik i 50'erne. Undersøgelse foretaget i Internationales Musikinstitut, Darmstadt. Manuscript.

Bergstrøm-Nielsen, Carl (1986): To musikalske eventyrere. Cage og Stockhausen. Århus (PubliMus).

Bergstrøm-Nielsen, Carl (1997): "Festlegen, Umreissen, Andeuten, Hervorrufen. Analytisches zu den Textkompositionen Stockhausens", MusikTexte 72, November.

Bergstrøm-Nielsen (2004): Dunkende, sydende, puselende, glidende. Interview med Erik Christensen. Dansk Musik Tidsskrift vol.7.

Bergstrøm-Nielsen, Carl (2006): Fixing/Circumscribing/Suggesting/Evoking. An analysis of Stockhausen's text pieces.

<http://www.stockhausensociety.org/intuitive-music.htm>.

Bonnesen et al. (ed.) (1984): "Ives, Charles E." in: Gyldendals musikhistorie 4, biografier, p.160.f

- Brindle, Reginald Smith (1986 (sec.ed)): *The New Music: The Avant-garde since 1945* (1975). Oxford (Oxford University Press).
- Cage, John (1973): *Silence* (1961).
- Childs, Barney (1974): "Indeterminacy", in Vinton (ed.): *Dictionary of Twentieth-Century Music* (N.Y. 1971). London.
- Cole, Hugo (1974): *Sounds and sign. Aspects of musical notation*. London/NY/Toronto (Oxford Univ. Press).
- Essl, Karlheinz: "Aspekte der seriellen bei Stockhausen", in: Knessl, Lothar (ed.): *Wien Modern '89 (Almanach)*, Wien 1989.
- Feist, Sabine (1997): *Der Begriff 'Improvisation' in der neuen Musik* (Diss., Berlin, Freie Universität 1995). Sinzig (Studio Verlag Schewe). (Berliner Musik Studien 14).
- Gieseler, Walter (1978): "Zur Semiotik graphischer Notation", *Melos* 1.
- Globokar, Vinko (1972): "Man improvisiert... Bitte, improvisieren Sie! ...komm, lasst uns improvisieren", *Melos* 2.
- Kohl, Jerome: (1978) "Serial determinism and "intuitive music", *In Theory Only*. *Journal of the Michigan Music Theory Society* vol.3, number 12, March. Ann Arbor, Michigan. Also online: http://www20.brinkster.com/improarchive/jk_7t.htm
- Lekfeldt, Jørgen (1977): *En undersøgelse af det musikalske materiale og dets anvendelse hos Karlheinz Stockhausen med specielt henblik på citatbehandlingen, set i relation til filosofiske systemer*. MA thesis, University of Copenhagen.
- Levaillant, Denis (1981/1996): *L'Improvisation Musicale. Essay sur la puissance du jeu*. Biarritz (Editions Jean-Claude Lattès)/Arles (Actes Sud). (Musiques et Musiciens).
- Mandel, Howard (1986): "Howard Mandel interviews John Zorn", *EAR Magazine* Vol. II no. 2, October.
- Mecklenburg, Carl Gregor Herzog zu; Scheck, Valdemar (1963): *Die Theorie des Blues im modernen Jazz*. Strasbourg/Baden/Baden.
- Munthe, Christian (1992): "Vad är frio improvisation?", *Nutida Musik* nr. 2. Also in English at <http://www.shef.ac.uk/misc/rec/ps/efi/ehome.html>
- Müller, Hermann-Christoph (1994): *Zur Theorie und Praxis indeterminierter Musik. Aufführungspraxis zwischen Experiment und Improvisation*. Regensburg (Gustav Bosse Verlag). (=Kölner Beiträge zur Musikforschung (Niemöller, Klaus Wolfgang ed.) Band 179).
- Schafer, R. Murray (1969): *The New Soundscape. A Handbook for the Modern Music Teacher*. Ontario (BMI Canada).
- Shimizu, Minoru (1999): "Was ist Plura-Monismus?", in: Misch, Imke; Blumröder, Christoph von et al. (Hrsg.): *Internationales Stockhausen-Symposium 1998*. Musikwissenschaftliches Institut der

Universität zu Köln. 11 bis 14. November 1998. Tagungsbericht. Saarbrücken, PFAU-Verlag. (=Signale aus Köln; Bd. 4).

Schwabe, Matthias (ed.) (1995) Ringgespräch über Gruppenimprovisation LXI. Thema: Haltung oder Handwerk. November.

Stanyek, Jason (1999): "Articulating Intercultural Free Improvisation: Evan Parker's Synergetics Project", Resonance 7,2.

Sutherland, Roger (1994): New Perspectives in Music. London (Sun TavernFields).

Toop et al. (ed.) (1978): "The Music/Context Seminar. LMC, August 2nd", Musics 20, December.