

Gottfried Michael Koenig

Process and Form:
Selected Writings on Music

edited by Kees Tazelaar

translated by Richard Barrett
(unless stated otherwise)

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Contents

Editor's Note (Kees Tazelaar)	7
Autor's Note	10
Translator's Note (Richard Barrett)	12
Preface: Koenig's Actuality (Horacio Vaggione)	13
1 On Musical (Artistic) Inspiration (undated)	19
2.1 Progressing in Stages (1999)	20
2.2 Musica e Numero (2001)	27
3.1 Interview with Ursula Stürzbecher (1971)	35
3.2 Interview with Heinz-Klaus Metzger (1971)	46
3.3 From Conversations on Webern (1973)	60
3.4 Interview with Patrick Fleury (1988)	74
4.1.1 Music and Number (1958, translated by Cornelius Cardew)	80
4.1.2 Complex Sounds (1965, translated by Ruth Koenig)	104
4.1.3 Serial and Electronic Methods in Electronic Music (1965)	122
4.2 Bilthoven Course 1961/62 (1961)	138
4.3.1 Notes on Musical Economy (1961)	193
4.3.2 Genesis of Form in Technically Conditioned Environments (1986, translated by Ruth Koenig)	196
4.3.3 The Word-Sound Problem (1961)	207
4.4 Chance Decisions in Musical Composition (1968)	218
4.5 My Experiences with Programmed Music (1975, translated by Ruth Koenig)	223
5.1 Problems of Electronic Composition (1962)	234
5.2.1 Condition – Instruction – Execution (1968, translated by Ruth Koenig)	241
5.2.2 Some Observations on the Impact of Technology on Music (1982, translated by Ruth Koenig)	246
5.2.3 Between Music and Technology: A Field of Tension (1990)	254

5.3	Studium im Studio (1959, translated by Leo Black)	262
5.4.1	Studio Technique (1954, translated Hans G Helms)	274
5.4.2	Via Electronica (1960)	277
5.4.3	Remarks on Compositional Theory (1968, translated by Ruth Koenig)	289
	Discography	311
	Index	313

Editor's Note

It was in the years following my composition studies with Jan Boerman that I first became thoroughly immersed in the writings of Gottfried Michael Koenig. The immediate reason was that I had seen possibilities for using Koenig's working methods in his electronic piece *Terminus* (1962) as a model for my teaching in the analogue studio at the Institute of Sonology, which had been part of the Royal Conservatoire in The Hague since 1986 and where I had been teaching since 1993. I reread the Sonology reader *Summary Observations on Compositional Theory*,¹ which I had acquired during my Utrecht years at Sonology. This time, however, this collection of texts hit me like a bomb, so that I can speak of my music *before* and *after* this renewed acquaintance with Koenig's ideas. After the *Summary Observations*, I began on *Ästhetische Praxis: Texte zur Musik*, his collected writings of which the first volume was published in 1991 and which would eventually take up six volumes.² A friendly collaboration with Koenig also developed, leading among other things to analyses and reconstructions of his electronic works *Klangfiguren II*, *Essay* and *Terminus I*.³

In the course of my doctoral research into the emergence of electronic music in the Netherlands, and the first studios and educational programmes in this area, conversations with Koenig and the access he gave me to his largely unpublished correspondence were crucial. Naturally, an extra dimension here was provided by the fact that I was investigating the origins and history of the institute of which I had in the meantime become the director.

Koenig made his entrance into Dutch musical life when he was invited in 1961 by Walter Maas (1909–1992) to lead the composers' course during the annual Gaudeamus Music Week.⁴ A year later, an annual course for electronic music under Koenig's direction began at the "Contactorgaan Elektronische Muziek" (affiliated with Gaudeamus), for which he came to the Netherlands for one week

1 Institute of Sonology / Utrecht University, 1971.

2 Gottfried Michael Koenig, *Ästhetische Praxis: Texte zur Musik* Band I–VI (Saarbrücken: Pfau Verlag, 1991–2006).

3 These reconstructions may be heard on the second edition of the double CD of Koenig's electronic works on the BV Haast label.

4 Koenig's lectures during the Music Week are reproduced in full in the present volume.

every month. In fact this was the beginning of education in the field of electronic music composition in the Netherlands.⁵ The success of this course led to Koenig becoming the artistic director of the Studio for Electronic Music at the Utrecht University, after which this studio grew into the Institute of Sonology.

Among the students and teachers of the present Institute of Sonology there is still great interest in Koenig's music, computer programs and writings. However, only a minority are adept in German, so that they rely on the small number of Koenig's texts of which English translations already exist. It has been my wish for many years to publish a substantial selection of texts from his *Ästhetische Praxis*. This plan became concrete when the Konrad Boehmer Foundation decided to create such a publication on the occasion of Koenig's 90th birthday in 2016. For various reasons this has taken longer than expected, but here it is finally. I am convinced that the Foundation is here acting in the spirit of Konrad Boehmer (1941–2014), who himself studied composition with Koenig and has pointed in numerous publications and lectures to the great importance of Koenig as composer and theoretician. Konrad's sister Ursula Jakobsen also insisted that the Foundation should give its attention to Koenig's work.

In the selection of texts for this book, a choice was eventually made for a structure which opens with an insight into Koenig himself through biographical notes, interviews and conversations. This is followed by texts dealing with music theory, where the reader will not fail to notice that his ideas regarding serial composition play a central role. These ideas, in my opinion, should in no way be treated as a historical misconception or a dead end in the evolution of music, as has so often been claimed in the Netherlands, but as a point of departure for a discourse in which discussion of the relationships between material and form are raised anew. The fact that the essence of serial composition consists not of rules imposed on the composer according to a universally applicable theory, but rather of a challenge to the composer to formulate his or her *own* rules, becomes clear from the following quote from Koenig (and not only here): "Composers who were unwilling to invent a personal serial system, perhaps even a new one for each new composition, could not really compose serially."⁶ The third part of the book focuses on electronic music, the music with which Koenig acquired the most fame, but which however forms a relatively small part of his oeuvre. Here too we find not prescriptions but proposals.

5 Between 1957 and 1960 there had indeed been a course on electronic music at the Delft University of Technology under the direction of Willem Kok, but this course offered only an introduction to certain technical principles and involved hardly any artistic content.

6 Gottfried Michael Koenig, "Segmente – A Structural Landscape" in *Interface* 21 (1), 44.

As editor of this book I consider myself very fortunate that Koenig – in spite of his advanced age – actively participated in its realisation, for which I am very grateful. His unbridled energy when discussing its content and commenting on the translations was truly impressive. It also occasionally gave him doubts about the texts themselves, especially some of the older texts which were produced under very specific circumstances and whose context is sometimes difficult to understand. Nevertheless it was eventually decided to include those texts in this collection on account of their great historical value.

Finally I would like to thank the Konrad Boehmer Foundation's board members Sander van Maas and Frits Zwart for their patience, translator Richard Barrett for his dedication to the project, and Gottfried Michael Koenig for all the inspiration he has given me.

Kees Tazelaar, May 2018

Author's Note

I welcome this edition as it makes texts accessible in English which were hitherto available only in German. For this, I am thankful in the first place to Kees Tazelaar who took the initiative for the publication and selected the material. His efforts were generously funded by the Konrad Boehmer Foundation. Thanks are also due to Richard Barrett who took the trouble to translate those texts which had not previously been translated. Some of them were difficult to understand, difficult not only for the translator but for the author too who couldn't remember what exactly had been on his mind fifty years ago.

Asking myself about my emotions when confronted with these witnesses of my own past, I find mixed feelings, because reading the old texts seems to be like looking at old photos. They evoke pleasant memories but also the thought that past events don't repeat themselves and therefore can't serve as paradigms of current situations. For this I would like to recall as an example my first visit to the Darmstadt International Summer Course. I went there in 1951 after terminating my music studies at the *Musikhochschule*, hoping to come in contact with the international scene. I remember a seminar led by Theodor W. Adorno during which Karlheinz Stockhausen explained and defended a composition by the Belgian composer Karel Goeyvaerts, and also a lecture by Werner Meyer-Eppler on electric musical instruments and the presentation of his sound models, which may, two years later, have played a role in the foundation of the Studio for Electronic Music at the Cologne radio station. And I remember many discussions about serial composition, led by the then most important composers and substantiated by concerts with their new works. Their names? Stockhausen, Pierre Boulez, Luigi Nono.

The dissection of the musical sound into parameters, typical for serial composition, was very useful in all questions of sound production in the Cologne studio, founded in 1951. In 1954 when I was in Cologne in order to resume my musical studies, I brought a visit to Herbert Eimert, director of the electronic studio, who introduced me to Stockhausen who on his part played some of the early pieces to me, explaining the technical equipment as he went. This opened my eyes and ears for a completely new world of musical activities. Here one discussed permutations, cut tape into pieces, listened to tape loops, assembled generators and filters on chairs, all the time sniffing a mixture of acetone and glacial acetic acid from the liquid glue used for the montage of pieces of tape.

It should be difficult nowadays to imagine a work environment where sounds had to be laboriously constructed with generators, tape loops, rulers and scissors. Nevertheless, the problems around the composition, production and combination of sounds are still the same, though now overcome under different circumstances and with different technical means. This is a thought that helps me to soothe the doubts aroused by reading the texts of this book which come from a world which, though having prepared the present one, no longer exists.

I can only wish that reading the texts of this book, borne under circumstances which won't repeat themselves but can still be comprehended in thought, might – while informing him – inspire the reader in his own work.

Culemborg, May 2018

Translator's Note

Firstly I should point out that some of the chapters in this book have been translated by others, as specified in the table of contents. I am extremely grateful to Gottfried Michael Koenig for many suggestions and clarifications during the process of translation. It seemed to me that the nature of the texts implied a translation which would lean towards precision rather than elegance, to “translate the difficulties” as it were, rather than smoothing them out and thus misrepresenting them. It should be borne in mind that many of these difficulties stem from much of the material having been written at a time when the ideas being described were new and even controversial, rather than having been subsumed into the often simplified overview of the evolution of serial and electronic music during the 1950s and 1960s which now forms part of the mythology surrounding that music. One thing that distinguishes Koenig’s account is that it provides a rational and impartial alternative to those of many of his contemporaries whose transparent intention is so often to put themselves at the cutting edge of developments. If electronic music is not just about new sounds but a fundamentally new way of thinking about music, Koenig’s writings and interviews are the expression of an incisive mind committed to understanding and mapping this new way. I believe this is still an urgent and unfinished task, and that Koenig’s contributions are of undiminished value for those of us who continue to engage with it.

Richard Barrett, May 2018

Preface: Koenig's Actuality

*"After all, composing means fulfilling a musical desire, satisfying musical curiosity, getting to know music that doesn't (yet) exist."*¹

*"Every score is a statement about music [...]."*²

In his article "Working with Project 1", published in 1991 in the journal *Interface* and subtitled "My Experiences with Computer Composition", Gottfried Michael Koenig stated: "By computer composition I understand the formulation of sets of rules with the aid of a computer with a view to working out musical contexts without explicitly defining the acoustic presentation space. If an electronic studio is used for the acoustic definition, we get electronic music; if an orchestra is used, instrumental music; if nothing is used, it remains composition theory."³

Here we have concisely expressed the node of Koenig's singular approach as a composer engaged in "music in its technical rationality" (this is the title of a series of lectures which he gave in Bilthoven in the early 1960s): if "nothing is used", a "musical context" remains as "composition theory", which, for a composer, is already a compositional action, allowing him to clarify what he wants to bring forth. Koenig often formulates the function of composition theory in all its generality; as he puts a little later in the same article: "Does a composer actually 'know' what he is doing – by which I mean: can he express his knowledge without applying it?"⁴

The last quote comes in Koenig's text after a personal memory of the circumstances surrounding his insight: "[...] I cast my mind back to the early *Ferienkurse* in Darmstadt and the discussion about composition technique (Goeyvaerts, Stockhausen, Boulez); was it not time to put these techniques to a systematic test?"⁵

The question of expressing compositional knowledge without applying it is not a metaphysical dream: it comes from the need to approach the thesis that supports any given musical empirical action. In the case of referring to serialism, the goal was not a quest for foundations or justifications, but of identifying what

1 Gottfried Michael Koenig, "Working with 'Project 1': My Experiences with Computer Composition" in *Interface: Journal of New Music Research* vol. 20 (3–4), 179.

2 Ibid.

3 Ibid., 175.

4 Ibid.

5 Ibid.

kind of knowledge was behind the practice – as Koenig pointed out, “every score is a statement about music”. Hence, in relation to the question concerning serial practice, Koenig wanted to find the thesis underlying it by adding another layer of practice: a theoretical practice. Hence “[t]he only answer [to clarify the actual serial practice] was to try it out”⁶ by means of a computer program encapsulating the main elements which could be analysed and objectivised: “The outcome was ‘Project 1’, a Fortran program which described a generalised model of serial composition”⁷.

In the abstract that preceded the article by Koenig I have been quoting, Otto Laske (in his role as editor of the issue) tries to describe Koenig’s propositions in this manner: “Project One [is] a tool for compositional-theoretical investigation (rather than for ‘computer-aided composition’). The program is seen [by Koenig] as a composer’s tool for reflecting the compositional process in music (but not only music) empirically, and for developing a personal theory of the composer’s process.”⁸

However, this description is accurate only if we add to it an important element (to which I will refer later): the role of an *interpretation* of the resulting data. In Koenig’s words: “The interpretation of the score table [meaning the alphanumeric output of a given run of the PR1 program] serves the purpose of revealing the musical idea on which the input data are based; not the idea for a particular piece, perhaps, but *for composition itself* [my italics].”⁹

Concerning serialism, Paul Berg gives us some important cues to help grasp Koenig’s ideas of the diverse conceptual layers that it implies, and points to its evolution towards multiplicity. According to Berg, Koenig “suggested that serialism is ‘more of a world-view or an aesthetic doctrine than instructions for the right way to compose’”.¹⁰ Moreover, “[i]n Koenig’s view, serialism is not just about the “series” but also about quantization and differentiation”.¹¹

So we can say that the Darmstadt discussions remembered by Koenig were for him also a way to take a distance from some principles that had not really been analysed, but were just adopted and taken for granted. As Berg says, “[t]he last insight into Koenig’s view of serialism that is relevant to his composing programs

6 Ibid.

7 Ibid.

8 Otto Laske, abstract for Koenig, “Working with ‘Project 1’”, 175.

9 Koenig, “Working with ‘Project 1’”, 177.

10 Paul Berg, “Composing Sound Structures with Rules” in *Contemporary Music Review* vol. 28 (1), reprinted in *A Laboratory for Sonology* (The Hague: Royal Conservatoire Publications, 2015), 88, partly quoting Gottfried Michael Koenig, “Segmente: A Structured Landscape” in *Interface: Journal of New Music Research* vol. 21 (1), 71.

11 Ibid.

is his acknowledgment of a relationship between serialism and aleatoric composition. Based on his listening experience, he suggests that the rate at which intervals occur is more important than their order.”¹² This leads to the following conclusion: “it appears that the trouble taken by the composer with series and their permutations has been in vain; in the end it is the statistic distribution that determines the features of a composition. Seen from this viewpoint, serial technique appears as a special case of aleatoric compositional technique.”¹³

This viewpoint includes the subjects of material and form. Material was almost the unique subject of discussion in Darmstadt’s early years. However, material may be conceived not only as the primary musical element, that is, sound, but also as “included compositional methods and rules”.¹⁴ According to Berg, “The extreme clarity of Koenig’s treatment of material is a characteristic of both his electronic and instrumental music. Appreciating this concern is a key to understanding his programs for instrumental composition.”¹⁵ Hence material, in its broader sense, becomes here inseparable from form. As Berg points out: “According to Koenig, form emerges during planning and realization”¹⁶ – and, quoting Koenig directly: “I experience form as a process as soon as I start working in the studio or at my desk; every bar on paper, every sound on tape changes its formal function every time I look at it, like the light in a landscape under scudding clouds.”¹⁷ “Since form appears during realization, it ‘also emerges when musicians improvise, form always being both desired and born, desired by the composer, born during the performance’.”¹⁸

Until now I have used the word “rule” only a few times. This is because this word, like many of Koenig’s expressions, needs some analysis so as to bring forth its meaning, which is not always the usual one. *Project 1*, like *Project 2*, and all Koenig’s musical conceptions (including sound synthesis), are rooted in the use and clarification of the rule idea. But this rule idea is not one-sided. We can remember

12 Ibid., 89.

13 Gottfried Michael Koenig, “Project 1” in *Electronic Music Reports 2* (Utrecht: Institute of Sonology, 1970), 33.

14 Berg, “Composing Sound Structures with Rules”, 89.

15 Ibid.

16 Ibid.

17 Gottfried Michael Koenig, “Genesis of Form in Technically Conditioned Environments” in *Interface: Journal of New Music Research* vol. 16 (3), 171.

18 Berg, “Composing Sound Structures with Rules”, 89, quoting Koenig, “Genesis of Form”, 172.

here Wittgenstein's statement: "Everything that arrives after a rule is an *interpretation* of the rule."¹⁹

Given that this is so also for Koenig, any output from his composing programs needs constitutively to be filtered by an act of interpretation. There is no question of taking an output and using it without careful scrutiny, as the goal is not to make music out of a black box. It is from the creation of rules and then their analysis as something *embodied* in a musical result, that a musical process becomes real (and not just a kind of rational dream). To clarify this point, Koenig speaks about the (normal) situation where the composer's control of his determinations is "manual", thus without computers; he calls this situation "spontaneous control". Opposite to this, in a situation of composing with his programs, Koenig says, "spontaneous control is replaced here by 'interpretation'. [...] The interpretation of the score table is also an interpretation of the compositional strategy."²⁰

Hence if a score "is a statement about music", it becomes clear that the program *Project 1* "is a collection of statements about music".²¹

We saw earlier that for Koenig, "the rate at which intervals occur is more important than their order".²² Incidentally, this gives us a cue for understanding the composition of *Essay*, an electronic piece realised by Koenig in 1957/58 at the WDR Studio in Cologne. The idea of this piece is described in detail by György Ligeti in a text from 1981. It is well known that Koenig was assisting Karlheinz Stockhausen in the realisation of such works as *Gesang der Jünglinge* and *Kontakte*.²³ But in 1957 Ligeti was in turn assisting Koenig in the realisation of *Essay*. According to Ligeti, "Koenig's *Essay* includes successions of sinusoids forming at certain moments melodic lines that one can follow, but that at other moments appear as strange agglutinations created by the briefness of the sounds and the rapidity of their succession."²⁴ And, as he comments later: "To the ear, the impression given by these sound constructions is strange – we did not have before any aural experience of entangled sounds. [...] When we fall into the domain of time values whose shortness brings us to the threshold of fusion [that is, according to Ligeti, of successions of sounds shorter than around 50 milliseconds], we obtain not only

19 Ludwig Wittgenstein, *Philosophical Investigations* (London: Routledge and Kegan Paul, 1953).

20 Koenig, "Working with 'Project 1'", 177.

21 *Ibid.*, 179.

22 Berg, "Composing Sound Structures with Rules", 89.

23 See for instance Kees Tazelaar, *On the Threshold of Beauty: Philips and the Origins of Electronic Music in the Netherlands 1925–1965* (Rotterdam: V2 Publishing, 2013), 252.

24 György Ligeti, "Musique et technique" in *Neuf essais sur la musique* (Genève: Éditions Contrechamp, 2001), 181.

the illusion of a simultaneity of attacks that, in fact, are successive, but also a new sound quality that Koenig names “timbre of movement” (*Bewegungsfarbe*).²⁵

Ligeti describes this experience in great detail, after which he did the same with his own *Pièce électronique n° 3*, which continues the experience lived through with Koenig. This *Pièce électronique n° 3*, however, was not finished by Ligeti; it was only realised almost 40 years later (in 1996) by Kees Tazelaar, Paul Berg and Johan van Kreijl at the Institute of Sonology.²⁶ Ligeti said that the technical equipment at the WDR in the 1950s didn’t allow him to finish the piece, which “originally was to be called *Atmosphères*”.²⁷ Instead, this failure gave fuel to Ligeti to start developing his ideas about “micropolyphony”²⁸ while using instrumental means. But the story did not end there, as, when the computer entered into the musical scene in the 1970s, some younger composers could develop further and further what has been called Granular Synthesis and Micro-time Processing.

Coming back to Koenig’s ideas, which I have tried briefly to refer to here, there are many that show by now, in 2018, a definite character of actuality. We can recall the notion of form as an emergent process. The idea of emergence, which nowadays substitutes for functionality, is one of great importance. We can recall also the conception of seriality as something moving towards multiplicity. And many others that we can recognise as we pass by.

I mentioned Koenig’s idea of “timbre of movement” in a lecture I gave in November 2014 at the Institute of Sonology, on the occasion of an international symposium celebrating 50 Years of Electroacoustic and Computer Music Education. I titled this lecture “A sense of Actuality”. The motivation for this title was manifold: on one hand to acknowledge the actuality of the electronic medium, on another to acknowledge the importance of the whole project of the Institute of Sonology, namely its tuning with what we can call “actual innovation”; and otherwise to show the actuality of Koenig himself, of his ideas, that are still present, not only at Sonology, but in themselves, by themselves.

The present text gives an *aperçu* of what I have said on another occasion when I was Konrad Boehmer Visiting Professor at the Royal Conservatoire in 2017,

25 Ibid., 187.

26 This 1996 realisation of Ligeti’s *Pièce électronique n° 3* is available in stereo on the double-CD *His Master’s Noise: The Institute of Sonology* (2001), BV Haast 06/0701.

27 Ligeti, “Musique et technique”, 189n5: “This piece was titled originally *Atmosphères*. But after I composed in 1961 an orchestral piece for which I used the title *Atmosphères*, I would refer to the electronic piece as *Pièce électronique n° 3*.” In this and the following note (on the same page) Ligeti gives a detailed account of his transition period between the work in the electronic studio and his new instrumental approach, starting, as he says, in the summer of 1958.

28 Ligeti has referred to “micropolyphony” on multiple occasions. In the text “Musique et technique” the expression appears on page 198n11.

thanks to a grant from the Konrad Boehmer Foundation,²⁹ an entity that prolongs the presence of Konrad Boehmer, a composer who was close to Koenig and who contributed greatly to spread his ideas. This publication in English of a book with some of Koenig's writings, translated by composer Richard Barrett, constitutes one important step more into Koenig's future.

Horacio Vaggione, January 2018.

29 <http://www.kboehmer.nl/>.