

# NOISE ON THE GRID: RHYTHMIC PULSE IN EXPERIMENTAL AND ELECTRONIC NOISE MUSIC

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## ABSTRACT

This paper presents a discussion on the effect of metric rhythms in modern noise and experimental electronic music. The role of rhythm in electronic music is discussed, followed by an overview of the concept of noise and different takes on using “extra-musical” sounds, along with some influential examples in the history of noise music. The significance of a rhythmic pulse in genres of glitch and digital noise is examined. Finally, the dilemma of using “beat” in art-music and the boundaries between pop and art cultures are presented.

## 1. INTRODUCTION

Rhythm bequeaths life to the world. From interplanetary rotational motions, to the microscopic and atomic interactions, the repetitive form of the DNA structure, or that of the respiratory system; from early tribal music of Africa, to the complex polyrhythms of Bartok, and to the minimalistic *Clap Music* of Steve Reich, it is the simple, grid-based element of rhythm, which helps things make sense and function.

The presence of rhythm in music goes all the way back to the creation of the concept of music itself. As Pierre Boulez concludes, the concentration on pitch and rhythm in the traditional musical notation clearly projects their equally essential role as the basis of the composition [2]. Whereas Karlheinz Stockhausen goes even further—as Aden Evens argues in his book *Sound Ideas*—and regards rhythm as an intrinsic part of the music by suggesting that ‘rhythm and pitches are in essence, same things at different oscillations’[8].

The significance of rhythm could be noticed more distinctly in the modern experimental and electronic music, where the elements of harmony and melody have somehow lost the leading compositional roles they were carrying along all the way up until the early 20<sup>th</sup> century. A number of great examples can be found in the works of the precursor of modern experimental music, John Cage. According to Douglas Kahn, Cage ‘had no feel for harmony’, and ‘he launched his contestation of western art music by placing rhythm over harmony’[12].

If the idea of using “noise” in music was implicitly introduced with the entrance of percussion into the orchestra, it was explicitly asserted by Luigi Russolo in

his Futurist Manifesto in 1913. Calling for integration of more dissonant, stranger and harsher sounds into music, Russolo tried to ‘conquer the infinite variety of noise-sounds’[16].

Since Russolo and his noise making machines, there have been numerous instances of putting conventionally extra-musical sounds into a musical frame using different methods and techniques, depending on the technology and philosophy of the day: from George Antheil’s *Ballet Mécanique*, to Pierre Schaeffer’s tape music, John Cage’s prepared piano pieces, Edgar Varèse’s and Stockhausen’s electronic works, Industrial Rock of 1970’s and 1980’s, Christian Marclay’s turntablism, and to the modern laptop produced glitch music. This paper takes a brief look at the evolutionary path that has led to the contemporary style of beat-oriented noise and glitch music, addressing the question “why use noise in a rhythmic format?”. Along with the general discussion of the historical trend, works of a few musicians are highlighted merely as examples of certain philosophical and technical approaches. Although a selection of any limited number of artists as the more influential ones would be, to some degree, anecdotal.

Section 2 discusses the concept of noise, outlining the main ideological approaches in using noise in music. Section 3 is a concise chronological representation of the incorporation of what was previously known as extra-musical sound, in musical compositions of the 20<sup>th</sup> century. Section 4 argues the role of rhythm and beat in modern noise electronic music, exploring the characteristics of the works released under independent record labels such as Raster-Noton, Mille Plateaux, and 12k. Section 5 discusses the dilemma of using beats and repetition, inspecting the delicate boundaries between popular and art cultures in electronic music. Section 6 presents conclusions and a discussion of the future of electronic noise music.

## 2. NOISE?

There are different approaches to define noise and its territory, and there are a number of texts that are devoted, fully or partially, to an exploration of these various approaches<sup>1</sup>. This section outlines a concise taxonomical summery of the most prominent ones.

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<sup>1</sup> ex: *Noise/Music: a History* by Paul Hegarty, or *Audio Culture: Readings on Modern Music* edited by Christoph Cox and Daniel Warner

## 2.1. Noise as Irregular Vibrations

In the first chapter of his classic writing on the physiological basis of the music theory, *The Sensations of Tone*, Herman Helmholtz argues that the differences between noises and musical tones are rooted in our aural perceptions, stating that musical tones are perceived as periodic, and noises are perceived as non-periodic motions [11]. However, in Russolo's view, although irregularity of motions in terms of time and intensity still vouches for the difference between "sound" and "noise", it is not 'sufficient enough to make a sharp distinction' [16]. As Trevor Wishart suggests, this distinction 'is a property of the way we hear rather than of the object itself', and somehow "arbitrary" [25].

## 2.2. Noise as Redundant Information

From another angle, Canadian composer, scholar, and environmentalist, R. Murray Schafer, in his *Book of Noise*, defines noise as "unwanted sound"; anything that 'is distinguished from signals' [18]. Information theorist Shannon and Weaver, in the same vein, describe noise as anything that is extraneous to the transmitting message [20], while Michel Serres calls it background information [19]. This extraneous information in the background could be ignored, as Claire Taylor argues, by the means of "attention filter" [23]. However, it could also be used, as Kahn metaphorically points out to an instance where a scrawl, although unacceptable to the teacher, is a valuable recourse for the graphologist [12].

## 2.3. Noise as Undesirable and Annoying

The more subjective way of looking at noise represents it as any aural experience that is annoying, or undesirable, depending on the perceiver, time, and the location of the event. This could be the sound of scratching a metal surface with a sharp object, the loud din of the construction operation, distortion effects in grunge music, a piece of atonal music in the 19<sup>th</sup> Century, or the quarter-step leaps of the Persian traditional music to the Western classically trained ears. Masami Akita (aka Merzbow) declares that if noise means uncomfortable sound, pop music is noise to him [15]. According to Edgar Varese, 'to stubbornly conditioned ears, anything new in music has always been called noise'. Varese defines noise as "any sound one doesn't like" [24].

## 3. BREAKING GROUND

At the onset of the 20<sup>th</sup> century, the birth of using extra-musical sounds in music was officially announced in Luigi Russolo's Futurist Manifesto. Fascinated by the rich aural possibilities provided by the machines of the post industrial era, Russolo invited musicians to 'break out the limited circle of sound' [16]. He pioneered this revolution by creating his orchestra of noise-makers<sup>1</sup>.

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<sup>1</sup> *In tonarumori*

While Russolo's distribution was the incorporation of extra-musical sound in music, John Cage took a step further by exhausting this idea and "extending the process of incorporation" to everything potentially audible [12]. In other words, if Luigi Russolo and the Futurists 'brought incidental noise to the foreground, John Cage would give permission to all composers to use any sound in composing music' [3]. Nevertheless, Cage himself credits Varese, who at the same time was leading the European front, "for having fathered noise" [12]. Varese, who called music "organized sound", found "electronics" a new "liberating medium" that would help liberate sound from "the arbitrary, paralyzing tempered system" [24].

With Pierre Schaeffer's *Five Studies of Noise*<sup>2</sup> (1949), concrete music<sup>3</sup> was born. Schaeffer's most important contribution, as Trevor Wishart discourses, was to draw attention to the essence of sound itself, disregarding the source that produces it [25]. This "mutual persistence of sound and noise" is later demonstrated in Stockhausen's music. As he 'gradually removes the periodic elements of a sound to leave noise and then reintroduces regularity', and 'amplifies the barrier between sound and noise, Stockhausen magnifies the boundaries of these temporalities to question their distinction' [8].

Regardless of their different methods and ideologies, these artists prepared the ground for all the following experimental electronic music of the 20<sup>th</sup> and 21<sup>st</sup> century. This was achieved through what Jacques Attali describes as "channelization of noise":

"All music can be defined as noise given form according to a code... that is theoretically knowable by the listener." [1]

For the purpose of this paper, to regulate the irregularity of noise through regularity of a rhythmic grid is one important mode of channelization.

## 4. MODERN PULSING NOISE

Continuing throughout the entire 20<sup>th</sup> century, the integration of noise and extra-musical sound in music changed form corresponding to the new available technologies. In his article in *Organised Sound*, Adam Collis discusses that the presence of noise in the music of the 20<sup>th</sup> century, that started with "musicalizing noise" (accepting the concept of noise as a valid sound source) and "noisification of music" (unconventional use of conventional instruments to create distorted sound), was synthesized into a third state towards the end of the century abreast of the developments in technology; that is "using the sounds of the audio system itself" [5]. This whole process is expounded in Kim Cascone's article *Aesthetics of Failure* [3], and even more thoroughly, in Caleb Kelly's book *Cracked Media* [13]. Collis subcategorizes this approach into "lowering the signal-to-noise ratio" and "use of the

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<sup>2</sup> *Cinq études de bruits*

<sup>3</sup> *musique concrète*

errors, failures<sup>1</sup>, and crashes of computer hardware and software” [5]. The former can be explained by Greg Hainge’s discussion of noise in the context of communication theory, as he argues that not only it is impossible to fully eliminate noise from the signal, a certain amount of noise can be even semantically constructive for the communication [9]. The latter addresses a question raised by him, quoted by Kelly:

“What happens ... when the primary content of the sound processed by a high-fidelity system is composed precisely of those sounds that the system is designed to eliminate?” [13]

These two methodologies became the cornerstone of the works of Oval and Pan Sonic duos, as well as those released under record labels like Mille Plateaux, 12k, and Raster-Noton. This genre is often referred to as minimal glitch: a term that, according to Joanna Demers, can be interpreted as the non-academic version of microsound [7]. Torben Sanglid notes that this music ‘focuses on sounds that are rarely recognized in everyday life; the forgotten secondary sounds of electronic equipment’ [17]. In the vast majority of the works produced within this genre metric rhythms and repetition are at the core of the composition. According to Hegarty, this is a music constructed of “digital debris”, “errors”, and “processing of normally extraneous sounds” that are re-organized into “beats” [10], or in the words of Philip Sherburne, “pops” and “clicks” that are ‘reconfigured into steady pulse of techno, with its unflagging 4/4 rhythm and almost polka-like backbeat’ [21]. “Loop” is certainly a significant factor here. However, as Sherburne asserts – specifically about the 12k releases— this loop ‘is not presented in the simple thud-thud-thud of the dance floor, but as a knotted code, a frame in which difference takes place’ [21].

“The beat in glitch is not simply a recuperation, as it continues the looping of a locked or damaged groove on record, and in this sense, the beat mediates technological change” [10].

Hegarty argues that ‘beats are often there to be thwarted, either through complexity, or purposeful variation’ [10]. In the music of Pan Sonic, as he describes, noise residues that are layered on top of each other are brought back into musicality by steady beats and percussive elements that are transpiring in all layers. On the music of Carsten Nicolai, he writes that ‘beats are not only messy, they are overridden by hums, blasts, failings and direct glitch sounds’ [10]. Nicolai’s rhythmic beat patterns are described by Torben Sanglid, as ‘a gradual process for the listener’ that ‘happens without being consciously noticed’ [17]. In his article, *A Mille Plateaux Manifesto*, Achim Szepanski proclaims that the simple repetitive-pattern-based minimalism of

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<sup>1</sup> According to Hegarty, this failure ‘is not a judgment about badness, but one of a refusal of heroic success in the form of musical mastery or mastery of musical forms’. [10]

the contemporary electronic music is sacrificed here, in an effort to strive for “super contextualization” and “the production of polyvalent structures” [22].

In spite of varying degrees of rhythmic complexity, the vivid presence of pulse-based metric rhythms in addition to the fact that most of these musicians are neither from “academic backgrounds in electroacoustic music” nor from the “commercial dance music scene” [5], identifies this music as a hybrid form created through mixing polarities: high art and popular, academia and dance, noise and beat. Collis contrasts Nicolai’s work with Stockhausen’s, arguing that they are somehow similarly aimed towards reconciling polarities [5]. “Bridging the gap” between the academic and the non-academic is also a matter of concern for Cascone. He argues that association with “dance music” has deprived most of the work in this area from the ‘academic consideration and acceptability that it might otherwise earn’ [3].

## 5. THE DILEMMA OF BEAT

As Joanna Demers states, “tonality, catchy melodies and rhythms, and sentimental themes” make music easily consumable, [7] paving the ground for its commodification and mass-production: concepts that cheapen the music for both Adorno, and Attali. But what happens when tone and tonality are substituted by noise and atonality, catchy melodies are replaced with timbral manoeuvres, and the sentimental theme is gone? Would the mere existence of a rhythmic pulse still degrade the music? In his article in *Computer Music Journal*, Ben Neil critically argues that what makes a rift between “serious” and “vernacular” music is the “absence or presence of repetitive beat [14]. Persistence of beat in the dance music played in clubs where music is —as Neil quotes Chadabe— “appreciated more in physical than intellectual terms”[4], is definitely a determinant catalyst in the creation of such notion. But is this argument any more valid than one suggesting all atonal music is dark, because it is publicly more experienced in contexts of dark and horror movies? Does prolific use of the minor key in sentimental tunes make the key itself sad in essence?

Neil points out to the fact that popular electronic music has always been borrowing from the experimental and art culture; a transaction that has rarely been done in the opposite direction [14]. Using repetitive beats in art-music venues, he targeted a more diverse audience; an effort to exhibit the liberation of art from “the confines of the modernist ivory tower”: [14]

“Art has spent long enough being cut off from the larger cultural sphere, now it is time for art to be connected in a new way to reflect the connectivity of an increasingly global culture”.

As Neil describes, post-modernist thought provided the art-music composers of the 1980’s a permit to employ elements of pop culture [14]. Is there a reason not to extend this permit to the use of loop-based rhythms and beats? While, as Neil argues, they can be simply

envisioned as a platform —like sonata form in classical music— in which electronic musicians frame their various compositional ideas [14]. According to Claire Taylor, a “grid” makes it possible to take noise under control —that is, giving form to it—, and “enhance the aesthetics of the message” [23]. She is of course speaking of visual noise, but in a musical transcription of her idea, the grid can be comprehended as a loop-based structure: beat.

Representing a music that excludes elements of melody, harmony, and “musical tone” in a punctuating rhythmic form does in fact make it more accessible to an audience who is not professionally involved with experimental music. But is that to be regretted, or to be celebrated? With the help of beat, the organizer of noise<sup>1</sup> refines the message. Beat can highlight the aesthetics of noise. It can make “harshness” pleasurable: “Pulse equals life, equals pleasure” [14].

## 6. CONCLUSIONS

“Sound and rhythm thus are the primary musical elements, sound comprising all that can be heard, and rhythm the formulating impulse behind the sound.” [6]

Regardless of the philosophy —if it is to expand the domain of musical sound, to draw attention to the ignored noises of everyday life, or to make art from failure— current digital technology makes it considerably easier to achieve “all that can be heard” and abate the sound-noise schism. Taking advantage of this privilege, current electronic musicians can broaden the scope of musical perception. If parallel fifths do not sound wrong to our ears anymore, filtered white noise or granularly synthesized percussive sounds can sound mellifluous if familiarized and presented well.

On the other hand, representing these noise-sounds in a grid-based format of pulses and metric rhythms can empower their aural and musical effects. Rhetorically articulated beats should be seen as a framework in which endangered “extra-musical” noises can be brought back to life, not as a menace to the artistic value of the music. Investigating in hybrid states using these polarities does not necessarily equal popularizing the art-music. It could, in fact, be an encouraging opportunity to “artisticize” the pop culture. Nevertheless, in order for the modern noise music to thrive, as Cascone argues, ‘new tools must be built’, and they must be built ‘with an educational bent in mind’ [3]. These tools can assist musicians in creating the hybrid states that further bridge the gap between academia and the industry. New technologies can always lead to new sounds, and these new sounds can be made more accessible once presented through potentially unlimited patterns of a rhythmic grid. Making the noise malleable, pulses of a metric rhythm help the popular ear experience and appreciate the new sounds of creative, experimental, and art music.

<sup>1</sup> Jacques Attali describes music as organization of noise [9]

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