“To recognise untruth as a condition of life:
that, to be sure, means to resist customary
value-sentiments in a dangerous fashion;
and a philosophy which ventures to do so
places itself, by that act alone, beyond good and evil.”

—Friedrich Nietzsche

“I threw all my past music career in the garbage.
There was no longer any need for concepts like 'career'
and 'skill'.
I stopped playing music and went in search of an
alternative.”

—Masami Akita

Noise is Stupid

‘*Standard deviation, flat Ontologies, Reality and Noise’*

James Whitehead/JLIAT

www.jliat.com

Noise is stupid – noise theory is stupid – REALITY is stupid.

Stockhausen - Aus den Sieben Tagen (1968), (The Seven Days)[1]

"VERBINDUNG". The instruction reads:

Play a vibration in the rhythm of your body
Play a vibration in the rhythm of your heart
Play a vibration in the rhythm of your breathing
Play a vibration in the rhythm of your thinking
Play a vibration in the rhythm of your intuition
Play a vibration in the rhythm of enlightenment
Play a vibration in the rhythm of the universe

Mix these vibrations freely

Leave enough silence between them

May 8th 1968[2]

Vomir "No entertainment!" "Play at maximum volume or do not"
"no dynamics, no change, no development, no ideas"[3]

---

[1] 1968 saw the May revolution in France which almost brought about radical political change on a global scale.– The attempted assassination of Rudi Dutschke raised the seeds of the Red Army Faction, the Baader-Meinhof group… 68 was a time of anti-war protests, Black Power groups the assassinations of Martin Luther King Jr. and Robert Kennedy. "The world seemed to be at a turning point" in the midst of this Stockhausen left America and on his return to Kürten received a letter from his wife that their relationship was terminated. He began a fast which originally intended to be suicidal – but from this came a renunciation of trivial domesticity, selfish emotionalism and Aus den Sieben Tagen. Of course 68 was no such turning point generally - "We never got it off on that revolution stuff, What a drag too many snags" (All the Young Dudes" - David Bowie) – and what followed led eventually to the collapse of communism, the proclamation that Capitalism works, the end of "History" and end of "Society" in the ideas of Reaganomics, Fukuyama and Thatcherism. Music in the Avant Garde shifted from the cosmos to family histories and Operas, relating to among other things Nixon's visit to China. Today – surprisingly the competing ideologies are not those of 68 but more like those of the Crusades, between a Christian Western Democracy of the first world and an Islamic jihad of the third… History perhaps didn't end but ran backwards – as also philosophy, to find itself once again concerned with 'The Absolute' and Metaphysics.

[2] John Harvey The Music of Stockhausen An introduction by John Harvey (University of California Press Berkley & Los Angles, 1975) pp. 113. - 117.

[3] Vomir - "Untitled" - released by At War With False Noise - 25 Feb 2007 &
No Dynamics, No Change, No Development, No Ideas – released by Bane Records 2011 http://www.youtube.com/watch?v=R3pHxQc2YkU

"We gain access to the structure of reality via a machinery of conception which extracts intelligible indices from a world that is not designed to be intelligible and is not originarily infused with meaning."[4]

[4] Ray Brassier, "Concepts and Objects" In The Speculative Turn Edited by Levi Bryant et. al. (Melbourne, Re.press 2011) p. 59.

Introduction:

Recently a group of philosophers[5] have attempted to speculate about what was once called metaphysics and the transcendental from points of view which are far removed from human presence, and is critical of it.[6] This may seem at odds with the transcendentalism of 60s music, in particular that of 'Aus den Sieben Tagen ', but in its rejection of a local humanism and a return to metaphysical transcendentalism it can be seen to express concerns wider than those of the 'domestic'. This marks not only a similarity with the Object Oriented Philosophy (OOP) group's speculations but also a critique of Kantian philosophy where the (human) subject becomes more significant than 'things in themselves'. A narrative which can be traced through thinking, the arts, including music, from Kant onwards via Romanticism, Existentialism, Psychoanalysis and the expressive impulses of much of Romantic and early 20th C music, the commitment to both structuralism and deconstruction in 'the linguistic turn', or formalism of modernity which is predominantly humanistic. The phenomenon of 'Noise' in popular culture which is now gaining interest in academic institutions could be nothing more than another form of humanism as existential angst, or a ploy to combat Capitalism and globalization,[7] however underlying the ideas associated with Harsh Noise Wall (HNW), who Vomir is one exponent, is a rejection of any such humanism, politics, or even 'thinking', making it remarkably similar to some of Brassier's thought in relation to the human subject.[8] A link that identifies the problem of the human

[5] I refer to Speculative Materialism or Speculative Realism, Object Oriented Philosophy, Object Oriented Ontology (OOP, OOO) which originated in its name of Speculative Materialism from a conference held at Goldsmiths College, University of London in April, 2007. The members of that and others, as the numerous titles above indicate, are not as much a 'group' or 'movement' but philosophers who have an interest in a metaphysical realism as critique of the dominant forms of post-Kantian "correlationist" philosophy. Original conference members being Ray Brassier, Iain Hamilton Grant, Graham Harman and Quentin Meillassoux.

[6] At its most extreme "…to acknowledge this truth, the subject of philosophy must also recognize that he or she is already dead, and that philosophy is neither a medium of affirmation nor a source of justification, but rather the organon of extinction." Ray Brassier, Nihil Unbound, (England: Palgrave Macmillan, 2010) p. 239.

[7] There has been a move to posit noise as an anti-capitalist trope – even as a form of environmentalism in such writers and works as Joseph Nechvatal's Immersion Into Noise http://www.openhumanitiespress.org/immersion-into-noise.html Accessed 29/05/2013 and Mattin's Noise and Capitalism http://blogs.arteleku.net/audiolab/noise_capitalism.pdf

[8] "Once upon a time, in some out of the way corner of that universe which is dispersed into numberless twinkling solar systems, there was a star upon which clever beasts invented knowing. That was the most arrogant and mendacious minute of "world history," but nevertheless, it was only a minute. After nature had drawn a few breaths, the star cooled and congealed, and the clever beasts had to die. One might invent such a fable, and yet we still would not have adequately illustrated how miserable, how shadowy and transient, how aimless and arbitrary the human intellect looks within nature. There were eternities during which it did not exist. And when it is all over with the human intellect, nothing will have happened." (Nietzsche 1873)

encounter with the world as a serious matter of response which does not withdraw into hedonism. Though historically hedonism appears to follow moments of enlightenment and recognition, a period which we might now find ourselves in once again, and one which certain thinkers want out of. What links the two 'musicians' above, Stockhausen and Vomir, or the musician and the non-musician (non-person) is a transcendentalism which is drawn from the very notion of the difficulty of thinking the concept and its object. If the world 'is not infused with meaning' then it more resembles Stockhausen's and certainly Vomir's world than any religious or scientific religiosity that maintains 'the truth is out there'. I have argued that music's current transformation into noise is a breaking of what is called correlationism, a 'music' which despite its ontology actually does gain an access to the real, or posits the prospect, which is something the current speculative philosophers seek, though this 'access' in any system of signification may well be impossible, or contradictory.[9] It is here I will argue that access to the real via signification may well appear impossible without contradiction, which is problematic to these philosophical moves, but these appearances are part of the consequences of certain ways of thinking, of which correlationism is indicative. I will not address Stockhausen's mysticism, as mysticism is placed, or places itself outside of any formal understanding tout court. However Vomir's and HNW's non-transcendental, non signifying presence is an immanence wherein music is rendered into noise and does have some actualizable – non correlational – access to reality, though its product might be considered trivial and unsatisfactory, for us. This could be termed more a 'provocation' and not a concept of access, as a provocation provokes 'the real' without recourse to reason which may have difficulties in accessing "The Real", if "The Real" is irrational. Rather than rely on speculation, speculations which may be mystical and or metaphysical,[10] I will attempt to demonstrate Noise's access to the real by using the very tools so admired by the speculative turn, in not speculating – but by a very dry explanation of what noise actually is. Which is why this might mean Noise becomes 'unsatisfactory for us'.

Deviation:

Recent philosophy both analytical and continental is plagued with difficulties for the non philosophical, both in the technicalities it uses and in the assumption of prior knowledge. The output of much recent 'continental' philosophy, which even to those engaged professionally in philosophy, is often

---

"Let us be on our guard against saying that death is contrary to life. The living being is only a species of dead being, and a very rare species." (Nietzsche 1882)

Quoted in Brassier ibid. p. 205.

[9] Meillassoux's idea of the Absolute is "the necessity of the contingent". Brassier manages to write though in his own terms seemingly 'dead'.

[10] In general metaphysics has suffered since Kant onwards. So deemed 'nonsense' by Analytical Philosophers and even rejected in continental philosophy until Badiou, Deleuze et al. However this paper is not a critique of metaphysics – old or new – but the exposition of an idea that Noise can be understood in fairly banal terms – but this understanding is not a metaphysical or artistic – or non-musical 'vision' of the Real.

termed 'difficult'.[11] I will not use, or develop such philosophies here in my exegesis of noise, though this I think could be achieved. My method will be mundane but not therefore unproblematic. The problem being that of the 'two cultures' of art and science, and the rift between them[12]. So at the risk of patronizing more than losing a reader, I need to attempt to define two 'scientific' processes which are used to determine the 'confidence' of data, its being meaningful, and the amount of noise present in a measurement, transmission of data or in communication. At minimum these could at least provide us with a metaphor for noise as a cultural phenomena or at best an actual objective insight, and so I hope to make these methods as clear as possible.[13]

'Standard deviation' is a statistical method widely used in science and data analysis. It is used for measuring confidence in data sets as well as having

---

[11] I'm referring to Derrida, Deleuze and Badiou amongst other 'Continental' philosophers, I will be discussing more recent work which has its fair share of 'inaccessibility' but also in its variations some which is fairly easy to access.

[12] The two cultures – famously The 1959 Rede Lecture by British scientist and novelist C. P. Snow –

"A good many times I have been present at gatherings of people who, by the standards of the traditional culture, are thought highly educated and who have with considerable gusto been expressing their incredulity at the illiteracy of scientists. Once or twice I have been provoked and have asked the company how many of them could describe the Second Law of Thermodynamics. The response was cold: it was also negative. Yet I was asking something which is the scientific equivalent of: Have you read a work of Shakespeare's? I now believe that if I had asked an even simpler question — such as, What do you mean by mass, or acceleration, which is the scientific equivalent of saying, Can you read? — not more than one in ten of the highly educated would have felt that I was speaking the same language. So the great edifice of modern physics goes up, and the majority of the cleverest people in the western world have about as much insight into it as their Neolithic ancestors would have had."

Across the Great Divide, Nature Physics 5, 309 (2009)

The divide runs in both directions, here is an exchange which took place in 1994 at the Santa Fe Institute during a seminar on "The Limits to Scientific Knowledge" – Stuart Kauffman (Chaos theorist) (Ralph Gomory Ex Vice president of research at IBM)

…"Then Kauffman speculated on how Wittgenstein might have responded.. (re Aliens watching a game of chess..) "I don't know who Wittgenstein is, for starters," Gomory replied irritably. Kauffman raised his eyebrows. "He was a *very* famous philosopher." He and Gormory stared at each other until someone said, "Let's leave Wittgenstein out of this…"

John Horgan The End of Science (London, Little Brown, 1996) p.238.

[13] So I will be pedantic and simplistic as possible, which may and probably will annoy those with an understanding of these technicalities. And in doing so perhaps over simplify to the extent of error. I claim no expertise, more a limbo between these two cultures and the foolishness to attempt to transfer methodologies. But from this perhaps a novel idea which others may find of interest and perhaps even peruse.

other functions. Though somewhat complex to non mathematicians and those not concerned with statistical analysis – and I include myself here as outside these groups – the principle is fairly simple. Standard deviation measures not the average (the mean) of a dataset but the spread of data around this mean. This can then supply the idea of "confidence" – if the standard deviation is low then the data clusters around a mean (average), whereas if it is high it is evenly spread out across the range of possible results.

For example – a data stream might carry numbers from 1 through 10. Here are two streams of data.

4 6 7 5 6 4 6 5 6 5

9 2 3 4 10 5 6 1 7 8

The average of these two streams is 5.4 and 5.5 respectively.
The standard deviation is 0.97 and 3.03.

The reason standard deviation is useful in measurement is that a low standard deviation gives confidence in the data, as it appears clustered around some 'attractor', the mean. Suppose measurements above are taken using some device, for instance for measuring the temperature of an object, and the first data sets results given above were derived. In this case we could be confident that the temperature (or any other measurement) was probably around 5.5. However if the second set of results were obtained we would suspect our measurements were erroneous. (This assumes what we are measuring is fixed and definite.) In other words the first data set seems to provide us with information- it has a 'message' – the second set has no information, no message and is termed – 'noise'.

The higher the standard deviation therefore the more 'noisy' the data stream. At extreme levels no coherent 'message' can be found – the signal is random, chaotic, noisy. Therefore it follows that random data will have a greater standard deviation, as it is not related to anything particular within the dataset or itself.

The second measurement methodology is Signal-to-Noise Ratio.

"Signal-to-noise ratio is also called SNR or S/N, is defined as the ratio of signal power to the noise power corrupting the signal. The Signal to Noise Ratio (SNR) is the defining factor when it comes to quality of measurement. A high SNR guarantees clear acquisitions with low distortions and artifacts caused by noise. The better your SNR, the better the signal stands out, the better the quality of your signals, and the better your ability to get the results you desire. SNR measurement is commonly used in the field of science and engineering. A ratio higher than 1:1 indicates more signal than noise. While

SNR is commonly quoted for electrical signals, it can be applied to any form of signal."[14]

This in statistical terms is as difficult as we need to get, we now need to 'look' at sound, including music, in a non auditory sense in order to facilitate using the above methods of analysis. This might also seem somewhat heretical 'in music' but for years now sound and music has been treated as numeric data just as everything else has in computing.[15] Here again there might be some 'humanist' objections.[16]

Computers and the Sound of Music:

When sound (or anything) is recorded digitally it is rendered into numbers. In the case of computers – binary numbers- in the case of sound on CDs and other digital devices various forms of binary representation, MP3, PCM etc.. PCM[17] is used for CDs and it is a relatively simple method. The sound wave is sampled at periodic intervals – very short – and a number generated, this set of numbers effectively 'plots' the shape of the wave numerically.

---

[14] http://ncalculators.com/statistics/signal-noise-ratio-calculation.htm Accessed 30/05/2013

[15] For better or worse I can cite Heidegger.

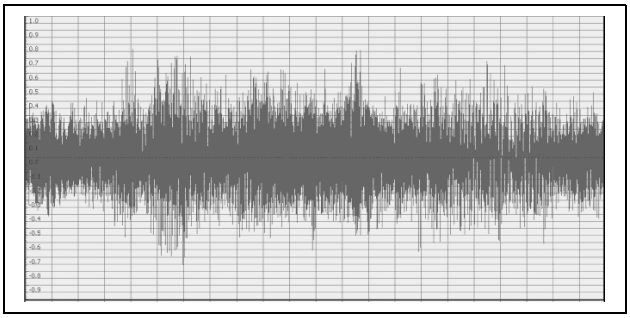
SPIEGEL: And what takes the place of philosophy now?
HEIDEGGER: Cybernetics.

Interview given in 1966. Quoted in Frank J. Tipler, The Physics of Immortality (London: Macmillan, 1994) p.86.

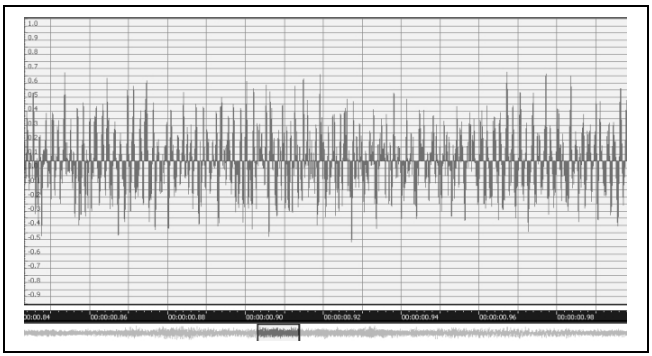
[16] "I am not a number, I am a free man" - 1960s television series "The Prisoner" Interestingly another product of 1968! The Prisoner is a 17-episode British television series first broadcast in the UK from 29 September 1967 to 1 February 1968.

[17] "Pulse-code modulation (PCM) is a method used to digitally represent sampled analog signals. It is the standard form of digital audio in computers, Compact Discs, digital telephony and other digital audio applications. In a PCM stream, the amplitude of the analog signal is sampled regularly at uniform intervals, and each sample is quantized to the nearest value within a range of digital steps." https://en.wikipedia.org/wiki/Pulse-code_modulation Accessed 8/6/2013

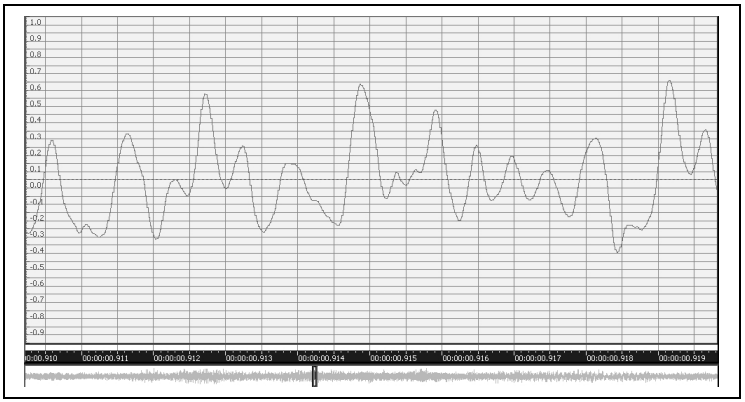
Here is a PCM sample (A short sample from Mozart's Symphony #40) loaded into a program so the sound waves can be 'seen'.

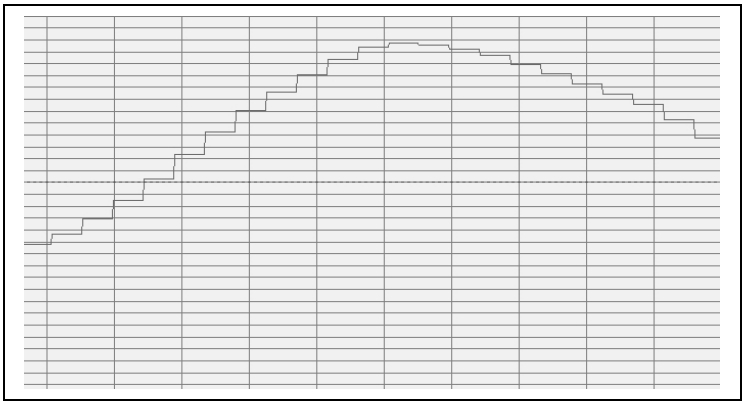


Each sample is 'taken' once every 1/44100 of a second. Above is just two seconds of sound.



As we ‘zoom’ in, how the sound is captured in PCM data can be seen.



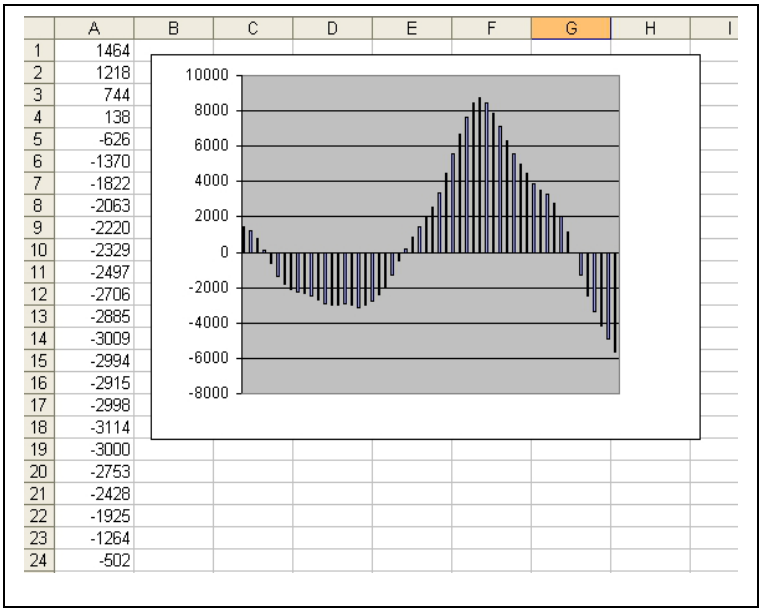


Above shows that the smooth waves are in fact made of discrete steps. Each step represents 1/44100 of a second.

The data (numbers) in decimal notation looks like this:

1464
1218
744
138
-626
-1370
-1822
-2063

If we plot these in an Excel spreadsheet the wave shape can once again be seen.



PCM data – which is how sound is encoded on CDs - uses numbers in the range of +32767 to -32768,[18] and takes a sample every 1/44100th of a second. (for audio CDs)

We now have some tools for measuring data, and a way of visualizing sound (including music) as numerical data. We can then process the sound files as numbers in Excel and we can use its Standard Deviation function (Stdev) as well as others to build up data for various types of sounds.

Historical Background:

I have previously been working with sound generation using pure numerical data and almost by serendipity loaded a few samples of sound files into Excel and calculated the standard deviations. The files were ones I had to hand, a piece of Mozart, some popular music from a mp3 player and 'noise'. Some of the noise 'natural' others from 'noise' 'artists', including Vomir. To my surprise the correlation between a high standard deviation and noisy recordings was immediately obvious and it was apparent that 'music' did have lower values than that of the noise samples, which would in data communications indicate a signal being present rather than noise. For example scanning a FM radio it is obvious for humans but also for the electronics which scans for transmissions, what is a signal being broadcast by a radio station and what is just static or noise. (this static is made of the random motion of electrons and outside interference – some of which is cosmic radiation including in this the noise of stellar objects…)
I posted these results to a noise discussion group which generated more heat than light![19] There were many objections, and also demands for other musics, noises and even pure waveforms to be plotted, which I did, initially more for amusement than anything else. One of the main contentions was these results didn't in anyway indicate that noise – natural or man made – carried less data than music – even though the stdevs for noise pieces were much higher than music. The final example in this case was that of the "sound" of a Sinclair Spectrum program on cassette tape when loading,[20] which gave another interesting result. It was argued that this sound was "noisy" and a high

[18] The reason the numbers are from -32767 through to +32768 is not important, but gives a sufficient range of values for the quality of recording for humans. This number range is stored in 16 bits, 2 bytes of data. The sample rate of 44100 again allows sufficient range of frequencies for human hearing. The maximum frequency being half the sample rate, 22050 hz. Again this is relatively simple, if you plot a wave on graph paper you will need two steps across the x axis for your smallest wave = highest frequency.

[19] There are many ways in which 'noise' can be defined, however noise qua noise is indistguishable objectively from noises from human and non-human sources. And whilst the simplistic method I have employed may be 'questionable' I have become aware of other more sophisticated objective analysis. For instance Nick Collins (Reader in Composition at Durham University) presented a paper at Huddersfield showing the use of Music Information Retrieval (MIR) – "Time-varying features such as the spectral entropy, sensory dissonance, perceptual loudness, transientness, spectral centroid and other timbral aspects are of high relevance to the perception of noise music." In the analysis and comparison of noise music to other musics…

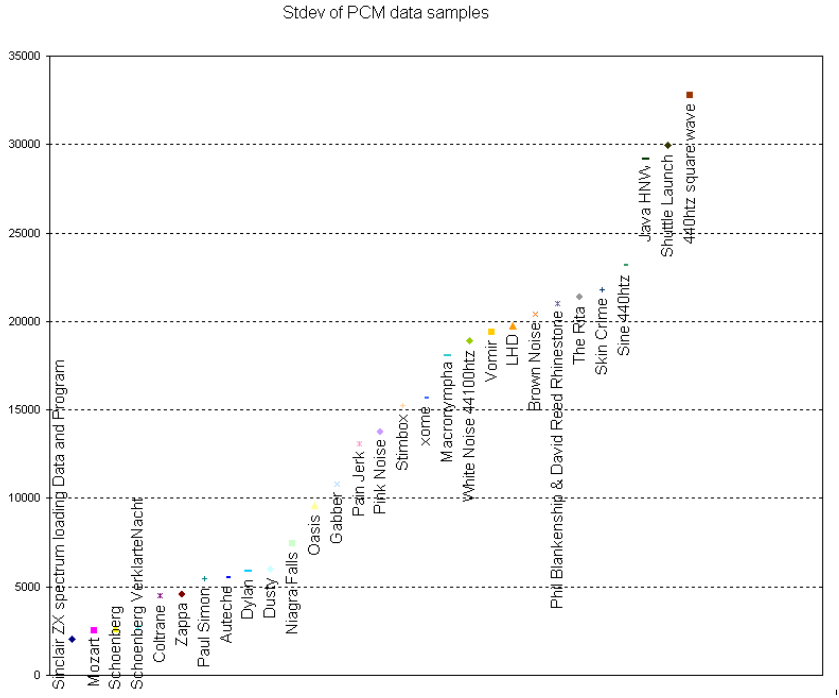
standard deviation was predicted despite the fact that the data was extremely organised, it being computer code. The sound was sampled, converted into numeric data and over several runs an average produced a very low standard deviation calculated which indicated a highly organised data stream. Perhaps the data which was organised, and to some listeners was recognisably so, to the taste of others was sufficiently unlike traditional western music to be unpleasant, and so thought of as noise. The presentation of the sound may alter in its superficial form but in order for it to carry information it must have structure, which perhaps is not always appreciated in one culture from another, but never the less meaning and structure are present . Foreign languages might sound like meaningless noise to others, but they are not, and attentive listening might clue the listener into the idea that the sound is a language and might have meaning by the indication of discernable structures.[21] No one method of signification can be regarded as more privileged than another, although in science for good reasons mathematics is privileged, for mathematical structures are less prone to subjective interpretations and nuances, which might be thought useful for a science intent on objectivity, whereas in other language systems, subtly and play of meanings might be as important in representation. It is now I think generally accepted the western tonality and rhythmic structures in music are not in anyway privileged over others, any more than certain languages are.[22]

[20] Early personal computers stored data and program code on audio cassette tape, this was done by modulating the binary data into sound, pitches of different values representing the zeros and ones. Not only did you hear this on saving and loading, the audio tapes were just that, you could play them on any cassette tape player and 'hear' the data and programs as 'noisy?!' sounds. Obviously these sounds represented not noise at all but very determined structures of computer data and code. The graph 'appears' to 'detect' this fact! despite subjective responses to the opposite.

[21] There are numerous famous examples of this, from the comic idea of an Englishman shouting in English to foreigners in order to be understood, through the decoding of the Rosetta stone to the search for extra terrestrial intelligence. http://www.youtube.com/watch?v=8qDjg8mdd8c

[22] Heidegger regarded Greek as the privileged language of Philosophy and in contemporary languages, not unsurprisingly, German.

Here is the original graph.



Despite much argumentation a clear correlation seems to exist between the Standard Deviation of a sound sample and its noisiness – or lack of meaningful data.
In order to supplement this first graph which was quite ad hoc I show in Appendix 1 other data sets from a more rigours methodology and using not only Standard Deviation but also the Signal to Noise Ratio's of the sample data. The results concur with this original graph.

Given the initial work, and before developing this, the implications of the idea of noise as 'noise music' being of the same epistemic value as noise as in 'noise pollution' – noise in failed communication, pushes the context of such noise works out of the 'musical' and into something quite 'other', regarding music, noise, rationality and The Real. Even if a definitive statistical correlation between 'noise music' and noise as failed communication does not exist, or can not be proven here, such thinking and work might hold some ontological

framework for regarding 'noise music' and the Real as being similar to one another, if not one and the same for the similarity between the nature of reality, as exemplified in natural noise phenomena, which is not rational, and 'noise music' appears closer than that between 'noise music' and music. And this similarity is the *lack* of meaning. This idea of noise as non-meaningful sound, despite its intentional and deliberate manufacture, I have elsewhere called 'noise qua noise', which is to distinguish it from having some essential quality or use. The idea of noise as the non-meaningful can also be more immediately noticed, and often is by detractors, as arriving from the simple, trivial and obvious subjective idea of 'noise' as being unwanted, as disrupting thinking and communication.[23] 'Noise qua noise' singles out noise from the many other interpretations of noise, such as noise as experiment, noise as politics, gesture, Dadaism etc. where its disruptiveness is championed. Noise qua noise then becomes neutral 'stuff' in the world, to be allowed or not, and if allowed, the possibility of exploiting noise in a variety of ways. All such uses of noise treat noise as raw material for production, the productions of comment, entertainment, discussion, event. Noise qua noise is essentially valueless and its use therefore turns noise into a commodity for which ethical and political discussions regarding such noise (such art) become no different to those regarding any other 'natural' resource, and the problematics which occur are no different in its exploitation and use. This attitude to noise is therefore no different to the attitude of man to the external universe. Humanity in gaining a consciousness is removed from being subsumed in the world, and is able to contemplate, and manipulate the world as if from the outside.[24] An understanding of noise cognizes that which is essentially lacking in cognition, noise is therefore nothing like a language or music which a priori has structures of understanding.[25] If, and I intend to argue, noise can be regarded as valueless, even when produced by 'noise artists', any conceptualism cannot be found in it but only outside of it, in its deployment, use, or in its denial and abandonment, its critique as being 'a waste of time', empty, pointless and 'nothing', or whatever other use it is put to. The 'value' as it is, is that it presents A Real.

---

[23] Noise pollution. For instance see Saeed Hydaralli's "What is noise? " in Reverberations, Edited by Michael Goddard et al., (London: Continuum, 2012).

[24] "It may have been that men, in becoming aware of themselves through the power of speech and in discovering their capacity to change the world, however slightly, also felt a sense of rupture from the natural world about them – an alienation from the cosmos of which they formed a part."
From the origins of primitive religion in Ninian Smart The Religious Experience of Mankind (New York, Charles Scribner's Sons, 1969) p.78.
Further, the idea of separation from the world might be one source of humanities exploitation of the environment at the cost of this environment, as if we are somehow separate from it, and so productive of the ecological disasters due to this alienation.. or mistaken seeming separation.

[25] Improvisation might be an exception, however it is not the intention to improvise which structures improvised music, as if such an intention were true then it would likewise apply to noise, but that the process relies a priori on the mental structures of the improvisers. Such mental structures of rarity and so of value?

There is a perceived problem in philosophy of how to gain access to a reality via thought which is rational, when that reality (The Real), is in itself not rational or reasonable. A problem which began at least with Hume's scepticism, where reality is more a psychological fiction than anything other, which spurred Kant into a more definitive solution of an objective certainty of the categories with which we know, at the cost of removing the objects that these categories 'know' from any significant or certain knowledge. Effectively limiting thought, this has now been identified as a very bad solution to the problem of knowledge, and something which since Kant has poisoned much of philosophy, found in the work of Hegel, Husserl, Heidegger, Wittgenstein, Lacan, Derrida amongst many other post Kantian thinkers as denial of access to The Real and the prohibition of metaphysical thought, by denying imaginative speculation about reality in itself in philosophy.[26] The recent philosophical interest in 'objects' lies in the attempt to know them outside of the Kantian prohibition of direct access to the world. Object Oriented Ontology proposes a 'flat ontology' where the subject is no more differently privileged than the object, and the relations between humans and trees are equal ontologically to relations between trees and spiders or tea cups and galaxies. However of course one object is immediately privileged here – that of OOO itself, as it apparently claims a superior reality of its ontology to the exclusion of others. The fall into contradiction of this new metaphysics at the first hurdle was foreseen in Wittgenstein's final proposition in the Tractatus, but his solution, 'silence', is insufficient. Insufficient for a number of reasons, firstly in positivist terms we simply sit around silently, or do science. In Graham Harman's view another non philosophical career is preferable to the sober moderation of 'radical philosophy', by which he means post Kantian to pre OOO philosophy,[27] and science itself has no particular claim on absolute objectivity. Science is provisional and makes generalized conceptualizations which at least is no life for us as individuals, and its reductionism though an unpleasant nihilism is not 'true' but pragmatic. For science, animals are generalized into species, yet no such things physically exist, it is individual living entities that exist as physical objects. The phenomenological and existential realization of this maybe gives us back our life as individual beings in the world but once again according to the OOO philosophers in an existentialism at the cost of a loss of access to this world outside of our peculiar perception of it. This difficulty for OOP and OOO of contradiction in thinking the unthinkable is circumvented in the non-philosophy of Francois Laruelle by establishing a being – or rather a 'One', in the world prior to thought and so prior to philosophy, from which access to thought, the philosophical decision, is possible but only in one direction, from The One, from which thought emanates, to which thought is prohibited access as in a one way street, from The One which is never subject to thinking. The One is a

---

[26] The first or most infamous expression of this and the coiner of 'correlationism' is Quentin Meillassoux "… the central notion of modern philosophy since Kant seems to be that of correlation. By "correlation" we mean the idea according to which we only ever have access to the correlation between thinking and being, and never to either term considered apart from the other." Quentin Meillassoux, After Finitude (London: Continuum, 2008) p.5.

[27] Graham Harman, On the Undermining of Objects: Grant, Bruno, and Radical Philosophy, in The Speculative Turn (Melbourne, re.press 2011) p.24

given Gnostic like, mystical 'One' removed from or foreclosed to thought. Contradiction or Harman's "weirdness"[28] is replaced with a mystical gnosis. All these philosophies share a metaphysics of desire to know the "Real", and a complexity of thinking which ranges from the bizarre to the obscure. Such gymnastics are brave attempts at moving from the mundane silence of Wittgenstein and into a relation via thought with the world qua world. The methods proposed should not be criticised for the complexities and even absurdities produced, as Laruelle demonstrates, are no more strange and absurd than those of science and mathematics, i.e. quantum theory and imaginary numbers. What these philosophers muster in their attempt to grasp the real more than their formidable knowledge and skill (which is found in other philosophies) is 'imagination', (or speculation) so long lacking in certain dry branches of philosophy, which sort to limit thought, and stop metaphysical thinking. I do not wish to attack or defend these speculations, other than say through creative imagination they continue to breath philosophically, though the theory of noise might throw another light onto just how these activities can function.

Primarily noise is not a human phenomena, unlike philosophy, as noise exists elsewhere in nature and non human communication.[29] Noise, unlike logic has no subject – object decisional dilemmas. Where philosophy has structures or de-structuring, noise has chaos. Noise is not an image of the real, it appears as it does, it is simple, accidental, 'easy', lacking skill, made by nature or human intervention, is noise pollution of industry and construction, destruction, war, or intentionally by feedback and glitch, from detuning a FM radio, via distorting signals until any significance is destroyed or recording the sound of a contact microphone pulled across gravel. With this completely simple and skill less access to noise, noise acquires a primary 'flatness' in terms of creativity, means and skill, open to all, anyone, anything, even the 'final' noise of particles at the extinction of the universe. Unlike OOO's flatness noise's shares a commonality with already known non human sources of noise. Extreme deliberate noise of Harsh Noise and Harsh Noise Wall (HN, HNW) is subjectively indistinguishable from other sources, harsh white noise, waterfalls, tornados, shuttle launches, and is also objectively indistinguishable, though both subjectively, and now shown here, objectively distinguishable from music. Noise in these extremes of HN and HNW lacks signification by virtue of its form, or formlessness, thus is easy to produce, but also therefore supremely boring. The difficulty of avoiding boredom and maintaining excitement via innovation requires great skill and is difficult to achieve, as witnessed by the achievements in western culture of ever creating 'The New'. Most modernist histories of culture follow such a teleology, music is one example of 'development' into ever more complexity. The problem within HN,HNW is the reverse, the problem is the *toleration* of such boredom, which is more difficult than attempting to escape it by reactionary moves, to make noise expressive and musical, to want to move noise from its seeming lack of significance and high standard deviation back towards low standard deviations

[28] Ibid p. 24.

[29] Extra terrestrial, animal and inorganic philosophies and philosophers is a speculation outside of the scope of this paper.

and meaning. However reality in its reality is insignificant, and a significant feature of reality for humans due to it being meaningless is that it too is boring. This is a general feature of the universe, more than the excitements of life on earth.[30] Although stars are violent and noisy, they 'burn' for billions of years, Nova may seem exciting but are brief interludes in a cosmos of aeons of little or nothing occurring. If we ignore the science fiction pictures and the computer enhanced Hubble photographs, reality is mostly empty space, we live in a relatively densely populated galaxy, but galaxies are only faint smudges in a universe of mostly empty space, in a universe predominantly dark and unrecognizable. And this universe's existence even if measured in trillions of years is nothing to the infinity outside of any finite existence. If we wanted to typify the universe by Monte Carlo methods, taking random samples at random times, then our results would be dull and empty for 99.999999...% of the samples. This universe's history, reality, is one which runs forward for trillions of years, where the second law of thermodynamics runs everything down to a final 'heat death', which if turned into sound would be HNW. Despite all our efforts reality is boring, for us, and despite all the efforts of 'musicians', HN, HNW, is also extremely boring.

What follows: Noise is not a genre (of music).

"The matters of true philosophical interest at this point in history are those which Hegel, agreeing with tradition, expressed his disinterest. They are nonconceptuality, individuality, and particularity things which ever since Plato used to be dismissed as transitory and insignificant, and which Hegel labeled 'Lazy Existenz.'"[31]
" the concept does not exhaust the thing conceived…. Dialectics is the ontology of the wrong state of things. The right state of things would be free of it; neither a system nor a contradiction…...Theory and mental experience need to interact"[32]

Noise's broadest definition is where it can occur not only as a human intention or accident, in which the results are equally contingent, but also in non human systems, such as computer systems, data transmission and cell reproduction – evolution via chaotic random mutation.[33] And its sources can be human,

[30] It is beyond the scope here to argue regarding so called natural beauty, however such concepts are products of the imaginations of the Romantic Poets, Composers and Artists rather than being inherent in nature. The point being that the generality of the universe is empty and boring, even if tiny parts may be interesting they will be nothing more than anomalies in a sea of nothing much. That science needs to dress up nature by employing techniques and tropes from Romantic Art is perhaps more about egoism or genius, another Romantic idea.

[31] Theodor Adorno, Negative Dialectics (London, Routledge, 1973) p. 8.

[32] Ibid p. 11.

[33] Random mutation appears to be the engine of biological evolution and not some desire or intent of the organism to change. Noise is then, if this is true, the origin of life as well as everything else in Meillassoux's hyper chaotic contingency of becoming.

cosmic radiation, random movement of electrons etc. The correlationist's interpretation of noise as a human term for sound , and normally a pejorative one, makes the same mistake as the correlationist's inability to accept a time before ancestrality. The human brain filters out much of the data it receives, and only has access to very limited and local data, we hear and see in limited bandwidths on a small planet. We think and reason in certain ways, using certain logics, which now we know do not work in non local spaces. The fundamental classical law of the 'excluded middle' for instance, is only locally true, for us, the universe is like our ' THIS'. This room looks like I SEE IT. These sounds are noisy, these others are NICE. However we are now aware that such thinking is typified of a privileged and biased view of reality, it is thinking anthropocentrically- ethnocentrically, logocentrically, phallogocentrically…. etc. in which MUSIC is sound qua humanly organized sound, in order to entertain humans, inform humans, explain x to…. humans, so might be doomed to being a correlational mirage– [34] but noise qua noise is not.

The organization of the medium, here in the work of processing the PCM data from sources of noise is shown when it is statistically analyzed to be "noisy", less organized. The lack of coherence is more than human subjectivity and appreciation or its reverse, but is a function of the lack of coherence in a given signal, in which processing mechanisms, both organic (human and animal) and inorganic, (scanning radios etc) cannot find any pattern. Patterns denote a possible meaning, one such primary mechanism for the creation of, and detection of structure, organized sound, music, being the human brain. Human brains are clearly responsible for music,[35] but we have seen, noise, unlike music, exists independently of humans, even of vibrations in a medium.[36] Noise as music can be used as a signifier of _____ (Nihilist angst, Anti Capitalism, Environmentalism..), and this is not in question, what is, is that it can also exist as a signal containing no information whatsoever. An objection to this last proposition might be that as this Noise was an intended 'thing' it must contain some information, even if at minimum that it was 'intended'. This is defeated as it is not clear, and cannot be clear, just what this noise is signifying because of its characteristics of being noise, it might be an angst protest, a condemnation of capitalism, but equally it might be in praise of capitalism and or a joyful expression of value. The noise of fireworks might be exciting or equally frightening just as the noise of gunfire

[34] Perhaps not 'doomed' but limited in a similar fashion as certain logics are in failing to capture 'The Real' are also limited. And working within limits is in no way detrimental to the production of meaning, it is essential.

[35] Outside of the scope of this paper would be the truth or not of this assertion. Non human musics, be it in animals or other sentient life forms or even non-biological systems…

[36] Music exists as sound, and sound can be defined as a vibration within a medium, in our case Air – in others water etc.. Further sound is a medium dependent phenomenon in which communication can take place, and which can be disrupted by noise, sound is part of a wider system of transmission of information via waves as found in the electromagnetic spectrum where a medium is not required.

might be frightening to most but not to certain individuals or groups.[37] A noise can also be non man-made, and accidental, and we have argued and shown that such noises cannot be differentiated from HN & HNW, and all of these are differentiated from music. The trivial idea is that whilst accidental noise is possible, it actually predominates in the wider sound world, and in a wider world of The Real. Music as typified by organization, is not accidental and very rare in the cosmos, and so valuable. The idea of a Mozart work being accidental is difficult, though as music becomes more noise-like, in Noise 'musics' and other 'musics', differentiating accident from deliberation can be difficult and at times impossible.[38] Noise can be a mistaken (natural) event, and so the problematic of distinguishing intention from accident invalidates any idea of intention where non can be found. Even if intention is there (in the making) noise effaces anything including that intention, for one of noise's characteristics is the effacement of information and meaning if one is present. The noise of a hurricane, shuttle launch or Vomir track is such that any intention, of communication, non-communication, protest or otherwise is eradicated by the phenomenon of noise itself. One can find in the hurricane meanings which may or may not be present.[39] Scanning the FM spectrum both humans and machines would no doubt skip a station broadcasting a HNW work. Such a non definition of noise makes its production arbitrary –

---

[37] For instance The Futurists, The Taliban, IRA…

Off To Dublin In The Green
Chorus:
And we're all off to Dublin in the green, in the green
Where the helmets glisten in the sun
Where the bayonets flash and the rifles crash
To the rattle of a Thompson gun

(as sung by The Dubliners)
Tune: The Jolly Ploughboy

[38] Richard Williams, who had been given two single-sided test pressings for his Melody Maker review of John and Yoko's Wedding Album, each with a blank side featuring only an engineer's test signal, took it to be a double album. Reviewing it as such, he noted that sides two and four consisted entirely "of single tones maintained throughout, presumably produced electronically". This led Lennon and Ono to send the following telegram to Williams:

DEAR RICHARD THANK YOU FOR YOUR FANTASTIC REVIEW ON OUR WEDDING ALBUM INCLUDING C-AND-D SIDES. WE ARE CONSIDERING IT FOR OUR NEXT RELEASE. MAYBE YOU ARE RIGHT IN SAYING THAT THEY ARE THE BEST SIDES STOP WE BOTH FEEL THAT THIS IS THE FIRST TIME A CRITIC TOPPED THE ARTIST. WE ARE NOT JOKING. LOVE AND PEACE STOP JOHN AND YOKO LENNON.

http://en.wikipedia.org/wiki/Wedding_Album Accessed 1/06/2013

[39] Job 38:1 "Then the LORD answered Job out of the whirlwind, and said, Who is this that darkens counsel by words without knowledge? "

something certain individuals who wish to be performers of worth find anathema, however they have chosen an extremely unreliable method for the demonstration of skill, and communication of ideas and or feelings.[40]

Kafka's Castle:

"The Kafkaesque aspect of Gödel's work and character is expressed in his famous Incompleteness Theorem…. Scientists are thus left in a position somewhat like Kafka in The Castle. Endlessly, we hurry up and down corridors, meeting people, knocking on doors, conducting our investigations. But the ultimate success will never be ours. Nowhere in the castle of science is there a final exit to the absolute truth."[41]

Within OOO (object oriented ontology) the object is strangely withdrawn. It withdraws both from us and even itself. A simple instance of this, an analogy,[42] is we can never fix a meaning or use on an object. A hammer can be used to make furniture and to break it, to wedge open a door, as a paper weight, part of a sculpture depicting communism or the city of Birmingham's coat of Arms. A definitive list cannot be drawn up, which poses the problem for anyone wishing of a definitive definition. Similar problems are well known, for instance Gödel's[43] incompleteness theory, through to the impossibility of definitive readings in literature or definitive critiques, interpretation etc. in music. However, clearly there are structures of meanings, and science being pragmatic both makes and breaks these. The question of meaning is big! But in simple terms a message has a meaning? A simple sign like "Keep off the grass". In music a piece can have a meaning intended to communicate an emotion, an idea or something about music itself, its form or possibilities… etc. In many religions the universe has a meaning, it was created for a reason. So in principle by 'thinking' (reasoning) we can come to know what it means and what we should do. If the universe is random chaotic and accidental, it

---

[40] "I threw all my past music career in the garbage. There was no longer any need for concepts like 'career' and 'skill'. I stopped playing music and went in search of an alternative." —Masami Akita. Pouncey, Edwin (August 2000). "Consumed by Noise". The Wire (198).

[41] R. Rucker, Infinity and the Mind (Sussex, Harvester 1982) p. 165.

[42] The technicalities and arguments as to the nature of 'objects' in OOO are very contentious. For an overview of these see Louis Morelle's article 'speculative Realism' in Speculations III, (New York, Punctum Books, 2012)

[43] The now famous incompleteness theory in simple terms means that mathematics will always hold uncertainties – for certain, and as modern science, especially physics is founded on mathematics it too can never produce a theory of everything which is certain. It appears also in computer programming, for instance one can never be sure if some compression algorithm is the 'best'. A zip program may compress files by 25%, but one can never know that this is the best, another may compress to 20%, another the same but faster… If we regard such programs they are no different to theories in physics, any theory must only ever be 'provisional'.

has no meaning, no reason, if so then the problem philosophically is how can we know, reason, about that which has no reason. There have been many ideas as solutions to this problem – one in particular is that we can not know things as they are, but only as we perceive or know them. Reality escapes our rationality…

This is somewhat a gross over simplification, another approach is to think of "purpose", what is the purpose of life? Again in religion we can discover that the universe has purpose, for instance, God made the universe for us to live in…. It has an essence, and we have an essence, just as a tea pot's essence[44] is to pour tea, so humanities essence is to follow the constraints of his maker likewise. So the tea pot's essence comes first, the potter has the idea of something which can pour tea, then creates the object to serve this purpose. Essence preceded existence. Once made, the tea pot has a clear role, tea pouring, and a clear set of criteria as to how well it accomplishes its role. The difficulty with humans and the idea of our creator, is where to place the responsibility when the performance of our role is unsatisfactory. This idea which gives us a certain purpose may initially appear to be a very good solution to the problem of life's purpose, for it gives us a set of guaranteed flawless rules. Unfortunately there exists more than one set of such rules and this shifts the problem of what should be done, to which set of rules should we follow. The problem becomes one of deciding which is the genuine set of rules which are divinely given and absolutely guaranteed . Just as much argument and therefore uncertainty is generated by competing certainties than uncertainty, which reduces the problem of truth to the same status as the nihilist atheist. Alternatively if the universe and humankind were not created by a God,[45] but by accident, it / we have no essence preceding our creation. No solution to the reason for the universe and its and our purpose in it exists, we just exist, we have no pre-given role, we may create one, but it is an illusion, the Existentialist's 'Bad Faith'. Our structures are simply that, man made, and though made from The Real we are not able to 'see' the Real by using them, all we see are the structures themselves, in Kantian terms we see via the structures of the a priori Categories which are not 'out there' but necessarily a priori to our perceiving the world. We cannot perceive it as it is, only as our structures allow.

From within the human built structures of meaning noise can be chaos, and this is the Real outside of experience, even for the religious who do not claim to know God but can perceive God only in a cloud of Unknowing. This poses all kinds of problems for audiences and practitioners, but in dogmatic thinking they all really boil down to the idea of either colonizing this territory, of noise, putting it to some use or purpose, or simply leaving it or enduring it. Thus

[44] An OOO philosopher would reject this line of argument not only in that the tea pot like the hammer can serve many purposes, but the tea pot 'withdraws' from us and even itself, into infinities….

[45] The God debate is not an issue here, more the idea of someone who knows the mind of God. For such a person no problems of meaning or purpose need arise. For our problem regarding 'purpose' to be a problem it is sufficient for God to be unknowable. Therefore access to a universe via knowledge is ruled out whether the universe is meaningless or whether it's meaning is unknowable – for us.

ideas of 'progress' and direction will either de-noise noise or not be effectuated. The decision, even for the religious, is that human knowledge is paramount, or there is and always will be the unknown which represents a territory outside of human reason's habitation. If this is true it marks one of the famous dead ends of thinking and modernity. We are by thinking estranged from reality, and the organized structures are not just philosophical but can be identified elsewhere in human creativity. A particular example being the statistical analysis of music compared to that of noise.

In any wider contingent reality, much of this reality is meaningless noise, and we utilize certain parts of this contingent reality as no longer objects in themselves but as signifiers which enable symbolizing structures and meaning, language, mathematics, music etc. with its obvious benefits for survival and so within the context of survival and culture such objects gain "value" and become meaningful. The source of this value is neither absolutely outside or inside the object, its source is in the power of privilege and selection.

In Quentin Meillassoux 's terms the 'Great Outdoors' is a mathematizable necessary contingency of hyper chaos. Yet here signifiers are working overtime and breaking down in contradictions and seeming counter intuitive results, a mathematical universe is ontologised from contingency. The argument that knowledge in itself can be independently (of force) consistent, the truth in itself, logic in itself (non contradiction), is not a privileging force but a universal fact and through the employment of this on the observed world an objective truth can be established which is unlike noise, singular, one, and coherent as an explanation to what is, has almost become to be taken as a given, notably in science and the generalized ideas about scientific thought. However,

"it is far from obvious that truth is either the primary or principal product of [cognitive] activity. Rather, its function would appear to be the ever more finely tuned administration of the organism's behavior" [46]

Knowledge is more about species survival than any universal, absolute truths, and its aloofness from human domestic survival is only a mirage. However even supposing some objective truth was possible, given an infinite universe or universes of recent cosmological thought, no such definitive truth which includes as much as it excludes, which must in order to affirm, negate, can exist. For in an infinite universe (AKA multiverse / The Bulk) –

"Leads inevitably to a depressing end to science. What is the point of exploring
further the randomly chosen physical properties of our tiny corner of the universe…?"[47]

---

[46] Paul M. Churchland, A Neurocomputational Perspective: The Nature of Mind and the Structure of Science (Cambridge MA: MIT Press, 1989) p.150.

[47] Paul Steinhardt Albert Einstein Professor of Science at Princeton University, in What is your Dangerous Idea Edited by John Brokman (London, Pocket Books, 2006) p.124.

Our truths in this case are only local, like town plans, useful only within the accident of the actual town in which we are, and in the period that it remains accurate as a map, useless in any other town, useless if the town is altered in the future. To think from ones own local map that every town has a "main street" or a high street or a boulevard is the same mistake for thinking a uniformity of value, truth, and cultural worth, of a single, the individual, and not of the multiple. Given a finite universe our culture (in which the ideas of truth and knowledge are embedded) makes a very very small difference, however in an infinite universe it makes no difference at all.

Infinity minus anything = infinity…. (Perhaps?):

The ultra contingency of an infinite universe may undermine scientific thought, any thought, in its claim to be anything other than just one species of noise. If we have a denial of access to the real by such thinking on ontological or on epistemological grounds, then even that thinking of a denial of access becomes contradictory. Such thinking devalidates access to the real just as Kant's thinking did, if this real is seen to be a privileging of thought.[48] A privileged ontology or epistemology is a nonhyperinstanced event, just as music is a nonhyperinstanced[49] structuring, filtering and organizing of noise.

The removal of skill and representation for noise is the anti-correlationist move that is ontology flattening, similarly the removal of correlationist constraints in logic, epistemology and ontology can free thought and produce a flattening of ontologies in thinking. If music is *for us*, if thinking is *for us*, the bounds are tied to the biological, mythic, local logics of anthropomorphism in a universe which is, and can be heard and thought as, not anthropomorphic.

I have shown that noise is a flat ontology of access, noise is a multiplicity of accesses to the real via the human, non human, deliberate, accident, without any hierarchical systems, and an effacement of any. Noise hyperinstanciates itself as infinite events of larger, not higher, infinities than finite events (music, theories, cultures). If noise escapes thought, meaning, music, signification

---

[48] In Kant's case in order to establish an Absolute he made The Categories an absolute and so limited thought to the human correlation. The necessity of this move, perhaps wrongly, de-absolutizes everything else and creates definitive structures for thought by thought. Thus the incompatibilities in philosophy are not reconcilable unlike the pragmatic reconciliations in science and mathematics. For instance the discovery of Non-Euclidian Geometry falsifies the Critique of pure Reason, but not in mathematics Euclidian Geometry, it remains valid, but part of a larger system. Euclidian geometry being the anthropological geometry of living on a 'seemingly' flat surface….

[49] Many worlds." In physics, hyperinstancing is a theoretical phenomenon in which a single event with only very minor differences appears in an inordinate number of Copenhagen parallels (alternate universes).Although the number is always infinite, for hyperinstanced events the number is far larger than for nonhyperinstanced events. See Dougald Murdock, Niels Bohr's Philosophy of Physics (Cambridge, Cambridge University Press,1987)

then it validates itself as noise, as noise qua noise. It is validated as a multiplicity of individualities. It can be so defined, and immediately escapes definition, yet remains noise. A similar trope to thought itself is that it too as a hyperinstanciated object is defined, immediately escapes definition whilst still remaining a thought, whilst still remaining thinking. Noise qua noise is itself noise, thought qua thought is thought and is the legitimation of thinking, thinking is speculation, or better thinking is speculations. Thought is non-contradictory hyperinstanciates of thinking thought.

The delimitization of thinking by thinking hyperinstancialy prevents a hierarchical access to the truth, but not to definitive accesses to reality in principle. Accesses, a plurality of access to thinking reality, not only for philosophy and science but also for you and I. Certainly science's[50] access to the real might well be beyond my full understanding, or certain philosophies may escape my thought, but the hyperinstanciated thinking of plural accesses to the world and its objects does give both myself and anyone else an access of thinking in a world, in a universe, to a world and to a universe. Theory does not constrain noise, so also does it not constrain thought, either philosophical or any other.

The accessibility of noise is an access for anyone, anything, to the world.[51]

If noise is left qua noise it becomes as such The Real in the scenario above, a real which we can have access to, via logics, speculations and metaphysics. The multiplicities of individual accesses achieves a democracy of thinking, or a flat ontology, which is the very thing that the speculative realists also seem to want to think. This is a new environment, of an ecology which also is democratic in that any use of any object as a privileging mechanism is destroyed, or rendered into noise itself, its currency and capital is debased until it becomes itself the "Ding an sich"is presented, and now presented no longer in, or as, an alienating system.

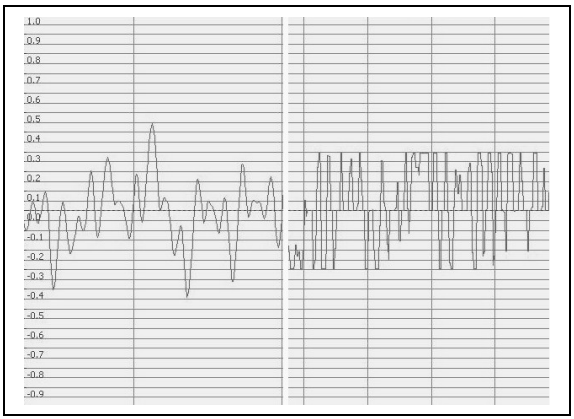
[50] Popular science writing might be entertaining but it would be a mistake to think through this we could gain anything but a second hand access to reality.

[51] Ibid.

Appendix.

A more detailed analysis of PCM data, calculating standard deviation (Stdev) and Signal to Noise Ratios (SNR).

Method: For each source 5 five second samples were randomly extracted. The 'Noise' sound files were also normalised so that the maximum volumes are close to identical, this removes any 'loudness' factor, however 'loudness' could be and is considered part of effectuating noise. The data then extracted as PCM mono data and processed in Excel.



Above – non normalised sample (Handel) Normalized Pain Jerk sample

The Standard deviation was calculated using Excel's Stdev function, the Signal to Noise Ratio (SNR) by using the mean of the data set and dividing this by the Standard Deviation.

The source of the PCM data came from the following sound files:

Music

John Coltrane A Love Supreme Part 1
Frank Zappa Hot Rats Little Umbrellas
Bob Dylan The Times They Are A-Changin
Handel Music for Royal Fireworks
Tallis Miserere (allegri)
Mozart Clarinet concerto K 622
Stockhausen Tierkreis

Noise (HNW)

Vomir – Musique De L'Indifférence (CD)
The Rita Thousands of Dead Gods
LHD Even Still
PainJerk & John Wiese Terrazzo

Noise (other)

NASA Shuttle launch
Garden Birds Doves, Owls, Swifts, Pigeons, Larks
SETI Search Arecibo SETIatHome

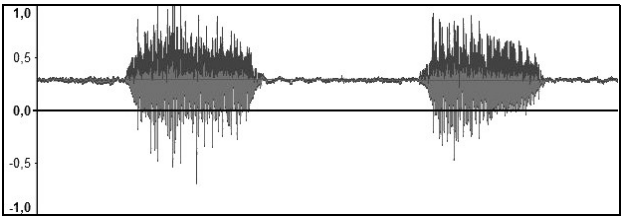
Reference Noises

White Noise generated in Audacity – Normalised
Square Wave generated in Audacity - Normalised

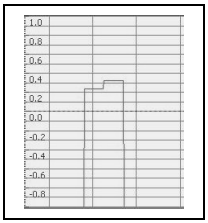
Initial Data and Findings.

Once again Noise works presented a much greater Standard Deviation as with the original data and graph. The SNR was in most cases close to zero with three anomalies. These were produced it appears due to the original recordings having DC offsets. Once removed the anomalies in most cases disappeared. In the case of The Rita this did not, but the recording itself was extremely noisy. This prompted a second set of data with DC offsets removed to see if SNR were significantly different. The source of the DC offset was not known, perhaps poor recording or analogue to digital conversion.

DC offset explained:
When a recording is made the samples should centre on Zero. A DC offset is where this does not occur for some reason. ("The cause is almost always a fixed voltage offset somewhere in the audio chain before the analog signal is converted to digital values. For example, the voltage may be directly caused by a faulty sound card, or may come from some other device that is attached to the card.") Software can remove this by centering the signal back to zero.



Below shows the 'strange' waveform from 'The Rita' sample with an apparent DC offset.



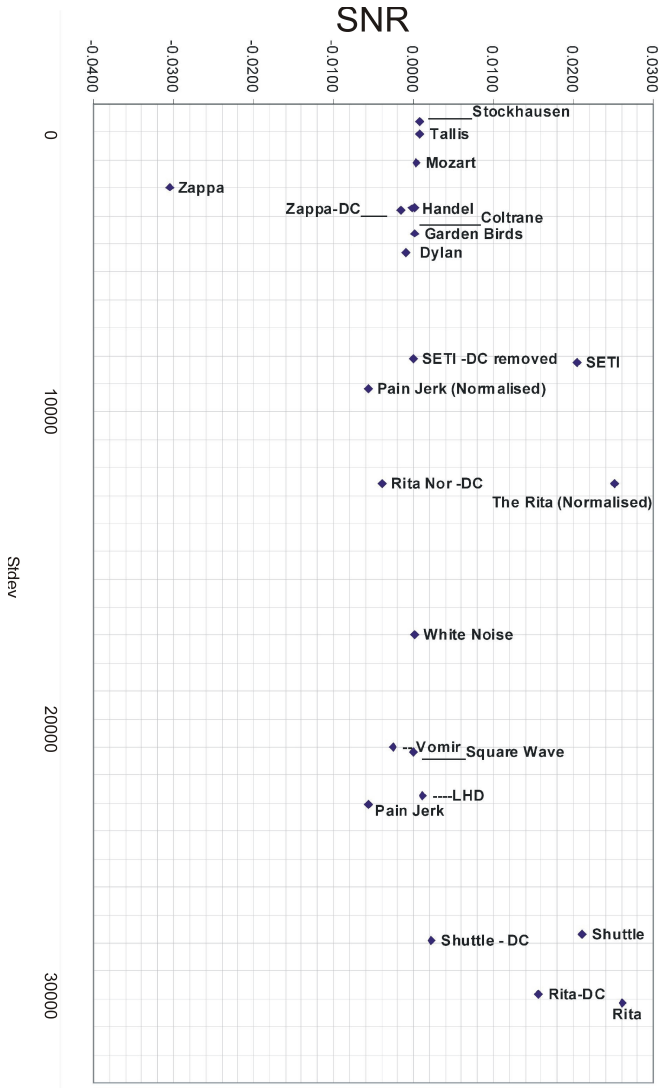
When samples are corrected for DC offset not only does the Standard Deviation indicate high 'Noise' values for 'noise music', the signal to noise ratios are negative indicating 'more' noise than signal, whereas the 'music' samples are all positive indicating more signal than noise in the sample. (The samples corrected were a subset of the main samples)

Non corrected Data.

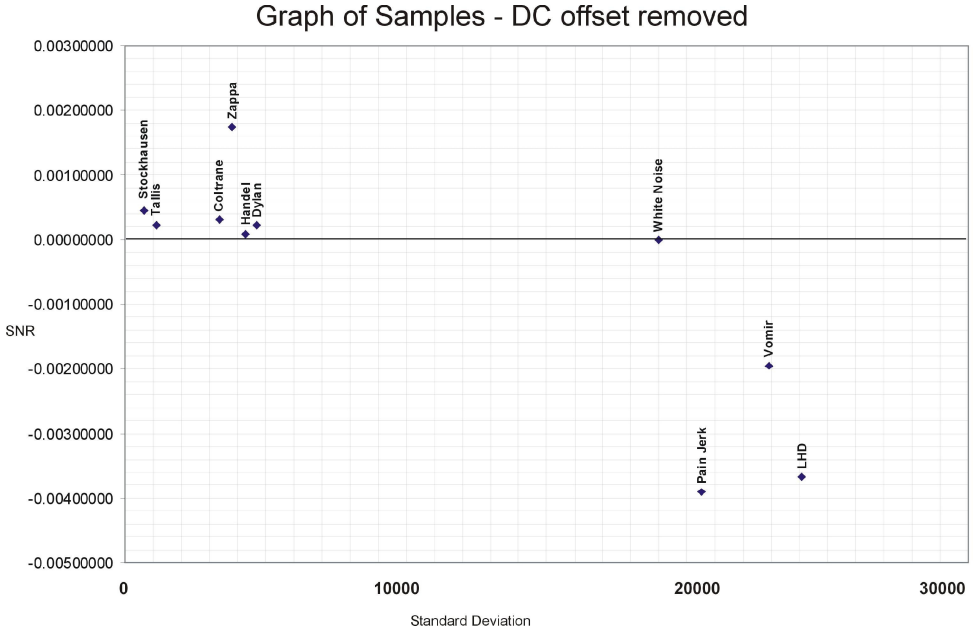
Name	Stdev	SNR
Stockhausen	646	0.0007
Tallis	1083	0.0008
Mozart	2098	0.0004
Zappa	2971	-0.0305
Coltrane	3686	0.0002
Handel	3731	-0.0002
Zappa-DC	3800	-0.0016
Birds	4629	0.0002
Dylan	5309	-0.0009
SETI-DC	9102	0.0000
SETI	9231	0.0204
Pain Norm	10175	-0.0057
Rita Norm	13559	0.0252
Rita-Nor-DC	13581	-0.0039
White Noise	18982	0.0001
Vomir	22991	-0.0026
Square Wave	23171	0.0000
LHD	24722	0.0011
Pain Jerk	25067	-0.0057
Shuttle	29689	0.0211
Shuttle-DC	29925	0.0022
Rita-DC	31827	0.0157
Rita	32139	0.0262

Corrected Data.

Name	Stdev	SNR
Zappa	3812	0.00173764
Stockhausen	668	0.00044167
Coltrane	3356	0.00030319
Tallis	1120	0.00022568
Dylan	4695	0.00021816
Handel	4302	0.00008851
White Noise	18982	-0.00000017
Vomir	22901	-0.00195251
LHD	24074	-0.00367511
Pain Jerk	20517	-0.00390423


SNR
-0.0400
-0.0300
-0.0200
-0.0100
0.0000
0.0100
0.0200
0.0300
Stdev
0
10000
20000
30000
Stockhausen
Tallis
Mozart
Zappa
Zappa-DC
Handel
Coltrane
Garden Birds
Dylan
SETI -DC removed
SETI
Pain Jerk (Normalised)
Rita Nor -DC
The Rita (Normalised)
White Noise
Vomir
Square Wave
----LHD
Pain Jerk
Shuttle - DC
Shuttle
Rita-DC
Rita

28


Graph of Samples - DC offset removed
0.00300000
0.00200000
0.00100000
0.00000000
-0.00100000
-0.00200000
-0.00300000
-0.00400000
-0.00500000
SNR
0
10000
20000
30000
Standard Deviation
Stockhausen
Tallis
Zappa
Coltrane
Handel
Dylan
White Noise
Vomir
Pain Jerk
LHD

29