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Adorno and Electronic Music

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Introduction

My research is about the aesthetics and philosophy of Theodor W. Adorno (1903–1969). I intend to apply Adorno's thoughts to the field of electronic music: I am using Adorno's concepts to understand and analyse electronic music and its historical background, and on the other hand, I am challenging Adorno's thoughts with the questions and peculiarities rising from the field of electronic music.

In my presentation, I will start with the rationalization of art and two kinds of rationalities. After that, few words about the role of technique in art and the mimetic behaviour of artworks. I finish with the concept of progress: I go quickly through the progress from the twelve-tone technique via serialism to electronic music and describe problems that rationality and control can cause. But first, I say something about Adorno.

Adorno is a German philosopher, sociologist and musicologist. He can be contextualised in Frankfurt School and Critical Theory that are directed to social change. I became interested in Adorno because for me, he seems to be one of the only philosophers who really know something about music. For Adorno, musical modernism, especially the dodecaphonic works of Schoenberg represents the most significant type of music and he is rather suspicious towards later musical styles.

Yet, there are some remarks on electronic music in his writings and his attitude towards it became more and more approving. Adorno seems to acknowledge the expressive possibilities of the new technology but he rejects the growing focus on timbre instead of form. To him, that represents regression to something pre-musical¹.

However, Adorno is not trying to protect music from technology. He thinks that truly modern artworks absorb influences from technology that is developing outside art². The best composers do not only obey the technological tendencies of society but also accelerate them³.

Anyhow, Adorno seems to fall behind the progress in electronic music; he does not understand or approve the changes in musical material, form, and techniques. In spite of that,

¹ See Floris Velema, "From technique to technology. A reinterpretation of Adorno's concept of musical material", *Soundscapes* [on line], 10, 2007, http://www.icce.rug.nl/~soundscapes/VOLUME10/From_technique_to_technology.shtml (last accessed 01/18).

² Theodor W. Adorno, *Aesthetic Theory*, newly translated, edited and with a translator's introduction by Robert Hullot-Kentor, Gretel Adorno & Rolf Tiedemann (eds), London, Continuum, 2002, p. 33.

³ Theodor W. Adorno, *Essays on Music*, selected, with introduction, commentary and notes by Richard Leppert, new translations by Susan H. Gillespie, Berkeley & Los Angeles (CA), University of California Press, 2002, p. 193.

I am highly convinced that Adorno offers useful conceptual tools for the philosophically oriented electronic music research.

Rationality

It is commonly believed that one of the main tendencies in modern society is the increasing rationalization in all institutional areas. The rationalization takes place not only in science, industry and business, but also in politics, religion and arts. The process is characterized by the growing domination of nature, exact calculations leading to efficiency, and the appropriateness of means to chosen ends, that is, instrumental rationality⁴.

For Adorno, rationalization is highly connected with enlightenment and it does not mean only positive developments in science and technology or continuously increasing freedom. Rather, rationalization and enlightenment demonstrate a form of tyranny: they are characterized by a great will to power. Domination of nature (both external nature and internal human nature) is the key factor; and with science and technology, humankind has produced more and more effective means for this domination⁵.

Adorno thinks that rationalization fails to achieve its positive aims because of the type of rationality it leans on, namely, instrumental rationality⁶. To overcome problems caused by domination we can try to broaden the concept of rationality with aesthetic rationality.

Adorno describes that “[r]ationality in the artwork is the unity-founding, organizing element not unrelated to the rationality that governs externally, but it does not reflect its categorizing order”⁷. In Adorno’s aesthetics, art and society are highly intertwined. Artworks both reflect and oppose society within their rational form. They criticize the instrumental rationality of society without being able to overcome it because they are rooted in society⁸.

Adorno thinks that artworks are rational because of the systematic control over their material: the conscious technical domination of composers defines artworks as something purposeful and rational in themselves. Yet, artworks are irrational from the perspective of instrumental rationality because the end that the highly rationalized artistic means pursue has no direct or practical purpose⁹. The main difference between aesthetic and instrumental rationality occurs right in the relation of ends to means.

Technique used in music is dependent on the development of extra-aesthetic techniques, which have been used for dominating nature. This forms a threat to art: artworks are supposed to be purposeless but their technique has a certain former function¹⁰. For example, electronics was not invented for composing music.

⁴ Don Martindale and Johannes Riedel, “Max Weber’s Sociology of Music”, in *The Rational and Social Foundations of Music*, Max Weber, translated and edited by Don Martindale, Johannes Riedel and Gertrude Neuwirth, New York, Carbondale (IL), Southern Illinois University Press, 1958, pp. xvii–xxi; Max Paddison, *Adorno’s Aesthetic of Music*, Cambridge (UK), Cambridge University Press, 1993, p. 135 & p. 138.

⁵ Ken Cunningham, “A Critical Theory of the “Rationality” of US Foreign Policy: The Case of the American War in Vietnam”, *New Political Science*, 24(4), 2002, p. 512.

⁶ Yvonne Sherratt, “Instrumental reason’s unreason”, *Philosophy & Social Criticism*, 25(4), 1999, p. 23 & p. 25.

⁷ Theodor W. Adorno, *Aesthetic Theory*, op. cit., p. 140.

⁸ Max Paddison, op. cit., p. 140.

⁹ Max Paddison, op. cit., p. 57 & pp. 138-140; Theodor W. Adorno, *Aesthetic Theory*, op. cit., pp. 139-141.

¹⁰ Theodor W. Adorno, *Aesthetic Theory*, op. cit., p. 217; Donald A. Burke, “Adorno’s Aesthetic Rationality: On the Dialectic of Natural and Artistic Beauty”, in *Critical Ecologies. The Frankfurt School and Contemporary Environmental Crises*, Andrew Biro (ed.), Toronto, University of Toronto Press, 2011, p. 178.

But then again, in artworks, extra-aesthetic technique transforms into something else; it adjusts itself to aesthetic rationality. Adorno thinks that in art, technique does not reflect instrumental rationality nor serve to dominate nature. By virtue of the total domination of its material through sophisticated technique, art resembles something that is free of domination¹¹.

How about rationalization in music? Broadly, rational control over musical material has led from polyphony to equal temperament; from the twelve-tone technique to electronic music and composing with the aid of a computer. In the process of rationalization, musical parameters are taken under control and reduced to calculable rules. The process aims for the purest possible sound and the most exact expression. Developing new instruments and technologies is also part of the rationalization in music.

As Adorno notes “[t]he perfection of the machine and the replacement of human forces of labor through mechanical forces has become a matter of reality in music as well”¹². The subjectivity and individuality of composers make way to the objectivity and rationality of machines. We can see this shift especially in post-serial electronic music¹³. The quest for the total control of all musical parameters is getting closer and closer to the instrumental rationality.

Mimesis

Adorno thinks that one of the tasks of art is to reflect the dreadfulness and horror of the outside world and thus the mimesis of techno-scientific procedures is part of aesthetic rationality. In the field of art, mimesis refers usually to the imitation of nature, but for Adorno it is more than that. For him, mimesis means making oneself similar to the hostile environment in order to protect oneself from that environment.

What exactly is being mimicked by artworks in the process of mimesis? It is not some particular hostile thing but the whole threatening process: especially the process of rationalization and the growing dominance of instrumental rationality in society¹⁴. Like said, art is unable to step away from society, and for Adorno the only way for art to protect itself and range against instrumental rationality is to take it inside itself. Art mimics the outside world and its rationality in order to reflect it, criticize it, and to free itself from it.¹⁵

Electronic music is a good example of art that absorbs and mimics techno-scientific procedures. Adorno says that especially the works of Edgard Varèse (1883-1965) demonstrate that it is possible to musically master the experience of a techno-scientific world. According to Adorno, Varèse did not use technological elements to achieve some kind of “childish science” but for the “effects of panic”¹⁶. He mimicked the hostile environment in order to gain control over it.

¹¹ Theodor W. Adorno, *Aesthetic Theory*, *op. cit.*, p. 288.

¹² Theodor W. Adorno, *Essays on Music*, *op. cit.*, p. 414.

¹³ Giacomo Fronzi, *Philosophical Considerations on Contemporary Music: Sounding Constellations*, Newcastle upon Tyne, Cambridge Scholar Publishing, 2017, pp. 198-199.

¹⁴ Max Paddison, *op. cit.*, p. 141.

¹⁵ *Ibid.*

¹⁶ Theodor W. Adorno, *Essays on Music*, *op. cit.*, p. 194.

Progress

The concept of progress is essential in Adorno's aesthetics: art should always progress. From the writings of Adorno, one can distinguish two notions of progress. Firstly, there is progress in domination of nature. That means increasing control over material with techno-scientific developments, progress in skills and knowledge. The process of rationalization and instrumental rationality are connected to here, too. Secondly, we cannot think of progress without the idea of humanity. Progress occurs only if humankind as a whole progresses, not just some particular spheres of it like science and technology¹⁷.

Within art, this means that there is progress both in the domination of material (in artistic technique), and in art itself. The latter means progress in the quality and truth content of art and it is connected to progress in humanity¹⁸. The progress in artistic technique does not automatically lead to progress in the quality of art but the development in the quality happens only through the progress in technique¹⁹.

As I understand it, for Adorno music is reflecting society at the level of its form, and in so doing, it is also criticizing society. Music must keep itself at the level of the current technique, technology and other expressive means because otherwise its ability to criticize fades. Music must progress in the level of domination of nature so that it could progress in the level of quality and truth content. If music does not progress, it starts to affirm (always-antagonistic) society.

As far as progress happens at the level of technical domination of artistic material, composers need to know how to utilize new technical (and technological) means and ideas. Adorno sees a problem there. He thinks that the development of technology is well ahead of the abilities and musicality of composers. Thus, composers are unable to respond to the demands of techno-scientific progress. This imbalance between technical progress and human responses resembles the situation in society in general: people are incapable of using and controlling the new products of the technical progress²⁰. And instead of using technology, technology uses them.

Progress in Music

In the final part of my presentation, I am to draw a line from musical modernism to electronic music. I will clarify the steps from the twelve-tone technique via serialism to electronic music. Arnold Schoenberg (1874-1951) created the twelve-tone technique in the 1920s. When using the twelve-tone technique, a composer organizes all twelve notes of the chromatic scale in a certain row. Notes must follow each other in that determined order and they cannot be repeated before all of them are heard. This guarantees that the idea of the tonal centre is completely negated.

¹⁷ *Ibid.*, p. 212 ; Theodor W. Adorno, *History and Freedom. Lectures 1964-1965*, translated by Rodney Livingstone, Rolf Tiedemann (ed), Cambridge (UK), Polity Press, 2006, pp. 145-146; Amy ALLEN, *The End of Progress. Decolonizing the Normative Foundations of Critical Theory*, New York (NY), Columbia University Press, 2016, pp. 6-7 & pp. 168-169.

¹⁸ Theodor W. Adorno, "Progress", in *Critical Models. Interventions and Catchwords*, Theodor W. Adorno, translated and with a preface by Henry W. Pickford, New York, Columbia University Press, 1998, p. 157 ; Theodor W. Adorno, *Aesthetic Theory, op. cit.*, p. 104 & p. 112.

¹⁹ Theodor W. Adorno, *Aesthetic Theory, op. cit.*, pp. 210-211; Theodor W. Adorno, *Essays on Music, op. cit.*, p. 182.

²⁰ Theodor W. Adorno, *Essays on Music, op. cit.*, pp. 648-649.

Worth mentioning, for Schoenberg the technique worked mainly as an organizational instrument that prepares and purifies musical material before the actual composing begins. He didn't believe that the technique itself would create the musical content or meaning.

The twelve-tone technique controls only a pitch; it does not organize other musical parameters. After World War II, composers started also to predetermine parameters like dynamics, duration, articulation, register, and timbre. This is called serialism.

Serialism can be heavily theoretical and (back then) it was getting inspiration from mathematics, statistics, information theory and set theory. For deeper analysis and more exact generation of sounds composers gradually turned into technology. They found new electronic media and started to produce music electronically²¹.

Therefore, serialism was a crucial factor for the birth of electronic music (or at least certain kind of it). In addition, in the historical context of serialism, electronic music was considered music rather than just an example of physical acoustics or some other scientific experiment²².

The ideology of serialism was followed most clearly in Cologne, in the Studio for Electronic Music of the West German Radio that was founded in the 50s. Composers working there were aiming especially to the total control of timbre (which has proved to be quite difficult to control). Composers thought that with the combination of the perfect sound material offered by electronics (pure sine waves) and the perfect theory (total serialism) they could reach the ultimate control²³.

From this kind of storyline, one can draw a conclusion that the development of technology offered composers tools so that they could put into practice or finalize the conceptual revolution that had started already with the twelve-tone technique. It can be said that composers turned into electronic equipment because they wanted to develop serialism further, transcend the problems of it with greater control²⁴.

Already in the strict rules of the twelve-tone technique Adorno saw a tendency to regression. The only justification for any composing method is that it organizes "complex musical contents". Composing method is a medium for the preparation of musical material before actual composition and if it is used as a static, mathematical system, it degenerates into fetishism²⁵. It becomes just a number game.

For Adorno, any composing method (be it twelve-tone technique or something else) should be the means not the end²⁶. "Vain is the hope that through mathematical manipulations some pure musical thing-in-itself might come into being", he says²⁷.

Adorno considered serialism as the total outcome of the progressive rationalization in music and at the same time, it was a blind alley. For Adorno, the perfect technical control represented an end of modern music. Compositional freedom and all subjective impulses are gone when composers replace the act of composing with an "objective-calculatory ordering"

²¹ Georgina Born, *Rationalizing Culture. IRCAM, Boulez, and the Institutionalization of the Musical Avant-Garde*, Berkeley & Los Angeles (CA), University of California Press, 1995, pp. 51-53.

²² Gianmario Borio, "New technology, new techniques: The aesthetics of electronic music in the 1950's", *Interface*, 22(1), 1993, p. 81; Paulo C. Chagas, *Unsayable Music. Six Reflections on Musical Semiotics, Electroacoustic and Digital Music*, Leuven, Leuven University Press, 2014, p. 125.

²³ Georgina Born, *op. cit.*, p. 52.

²⁴ Giacomo Fronzi, *op. cit.*, pp. 192-194.

²⁵ Theodor W. Adorno, *Essays on Music, op. cit.*, pp. 184-185.

²⁶ Max Paddison, *op. cit.*, pp. 84-85.

²⁷ Theodor W. Adorno, *Essays on Music, op. cit.*, p. 194.

of all musical parameters. That is when all the parameters of music are subordinated to a predetermined row. For Adorno, this was an over-rationalization of music and a sign of the victory of instrumental rationality²⁸.

Adorno thought that if the whole act of composing is just to write down what series automatically produce, “one could compose better with an electronic computer than by troubling a composer”. However, results will be something null and void²⁹. Adorno did not believe that serialism could develop further and eventually solve problems caused by progressive control and rationality (maybe with the higher level of rationality). However, this “objective-calculatory ordering” went even further with electronic music.

References

ADORNO, Theodor W., “Progress”, in *Critical Models. Interventions and Catchwords*, translated and with a preface by Henry W. Pickford, New York, Columbia University Press, 1998, pp. 143-160.

ADORNO Theodor W., *Aesthetic Theory*, newly translated, edited and with a translator’s introduction by Robert Hullot-Kentor, Gretel Adorno & Rolf Tiedemann (eds), London, Continuum, 2002.

ADORNO Theodor W., *Essays on Music*, selected, with introduction, commentary and notes by Richard Leppert, new translations by Susan H. Gillespie, Berkeley & Los Angeles (CA), University of California Press, 2002b.

ADORNO Theodor W., *History and Freedom. Lectures 1964-1965*, translated by Rodney Livingstone, Rolf Tiedemann (ed), Cambridge (UK), Polity Press, 2006.

ALLEN Amy, *The End of Progress. Decolonizing the Normative Foundations of Critical Theory*, New York (NY), Columbia University Press, 2016.

BORIO Gianmario, “New technology, new techniques: The aesthetics of electronic music in the 1950’s”, *Interface*, 22(1), 1993, pp. 77-87.

BORN Georgina, *Rationalizing Culture. IRCAM, Boulez, and the Institutionalization of the Musical Avant-Garde*, Berkeley & Los Angeles (CA), University of California Press, 1995.

BURKE Donald A., “Adorno’s Aesthetic Rationality: On the Dialectic of Natural and Artistic Beauty”, in *Critical Ecologies. The Frankfurt School and Contemporary Environmental Crises*, Andrew Biro (ed.), Toronto, University of Toronto Press, 2011, pp. 165-186.

CHAGAS Paulo C., *Unsayable Music. Six Reflections on Musical Semiotics, Electroacoustic and Digital Music*, Leuven, Leuven University Press, 2014.

CUNNINGHAM Ken, “A Critical Theory of the “Rationality” of US Foreign Policy: The Case of the American War in Vietnam”, *New Political Science*, 24(4), 2002, pp. 509-523.

FRONZI Giacomo, *Philosophical Considerations on Contemporary Music: Sounding Constellations*, Newcastle upon Tyne, Cambridge Scholar Publishing, 2017.

²⁸ Max Paddison, *op. cit.*, pp. 266-267; Theodor W. Adorno, *Essays on Music*, *op. cit.*, p. 187 & pp. 656-657.

²⁹ Theodor W. Adorno, *Essays on Music*, *op. cit.*, p. 657.

MARTINDALE, Don and Johannes RIEDEL, “Max Weber’s Sociology of Music”, in *The Rational and Social Foundations of Music*, Max Weber, translated and edited by Don Martindale, Johannes Riedel and Gertrude Neuwirth, New York, Carbondale (IL), Southern Illinois University Press, 1958, pp. xi–lii.

PADDISON Max, *Adorno’s Aesthetic of Music*, Cambridge (UK), Cambridge University Press, 1993.

SHERRATT Yvonne, “Instrumental reason’s unreason”, *Philosophy & Social Criticism*, 25(4), 1999, pp. 23-42.

VELEMA Floris, “From technique to technology. A reinterpretation of Adorno’s concept of musical material”, *Soundscapes* [on line], 10, 2007,
http://www.icce.rug.nl/~soundscapes/VOLUME10/From_technique_to_technology.shtml
(last accessed 01/18).

WINDSOR W. Luke, “Autonomy, Mimesis and Mechanical Reproduction in Contemporary Music”, *Contemporary Music Review*, 15(1-2), 1996, pp. 139-150.