

# TECHNIQUE, EXPERIENCE AND THE SOCIAL FUNCTION OF TECHNO MUSIC: A COMPARATIVE ANALYSIS OF THEODOR ADORNO AND ROBERT FINK

— FEATURE ARTICLE —

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## ABSTRACT

The aim of this article is to deepen reflections on the links between the technical aspects of techno music, the experience of listening to it and its social function. In order to achieve that goal, we carry out a comparative analysis between Theodor Adorno and Robert Fink, which allows us to construct an interpretation of the social dimensions of the techno technique, specifically from the analysis of its teleology and time. This work acknowledges the irreconcilable aspects of the authors; where Fink finds a liberating possibility of manifestation and creation of desire or an expression of an emerging new subjectivity, Adorno finds the innermost fibres of a mechanism of social alienation. These contradictory interpretations, complexified by contributions from other authors (such as Rick Snoman, Mark Butler and Diedrich Diederichsen, Ragnhild Solberg and Juliane Rebentisch), allow us to build a detailed description of the particularities of techno aesthetics.

KEYWORDS: techno music; aesthetics; social function; experience

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## INTRODUCTION

This paper proposes an articulation between the technical dimension of techno, its forms of experience and possible readings of its social function. To this end, we work with two authors who, with radically different interpretations, allow us a double entry into the aesthetics of techno. On the one hand, we work with the contributions of Theodor W. Adorno, a philosopher who is recurrently linked to cultural elitism but who nevertheless provides us with a strong theoretical framework for reflecting on the relations between a musical technique and a given social situation. On the other hand, Robert Fink, who offers a greater description of the musical structures of techno, proposes a progressive reading of the type of experience that this genre can enable. It is not the aim of this paper to suggest a reconciliation of two theoretical frameworks that are so widely distanced. Rather, we seek to construct an interpretation of the aesthetics of techno where these contributions, by the very dissonance they generate between them, manage to overcome each other's blind spots in their theories.

Our choice of authors and debates allows us to organise this work into two moments. In the first one, we deal with reflections on the social function that can be traced in the production of techno music. Although we seek to direct this issue on the specifics of this genre, we are not unaware of the links and similarities between techno and other genres. In this first moment, on the one hand, we will examine the contributions of Theodor Adorno. Although he only makes limited reference to certain electronic and electro-acoustic music, his analysis is valid for tracing the logics of late capitalism and the culture industry within music itself. His idea that music can be experienced as a natural language within the framework of the culture industry, an idea that he develops in his analysis of popular music, is crucial for our articulation between techno technique and social function. On the basis of Adorno's critique, we propose to decipher and understand how the experience, characterised as "proper ideology", of this natural language is sustained (1976: 50).

On the other hand, Robert Fink allows us to contrast Adorno's reading with his analysis of the technical procedures of minimal music and their prevalence in electronic dance music. Although Fink brings these procedures closer to an advertising logic, he argues that the function of the music can be found in the manifestation of a new epochal subjectivity and the stimulation of desire. We conclude this first moment by pointing out the counterpoints that place these authors in opposite positions, and by highlighting similar approaches that allow us to delve deeper into the characteristics of techno.

In a second moment, we examine specific debates linked to the immanence of techno such as its structural logic and the type of teleology and time it suggests. Here we bring back Adorno and Fink, but we also study authors who have worked specifically on techno such as Rick Snoman, Mark Butler and Diedrich Diederichsen, Ragnhild Solberg, and authors who have worked on it in a secondary way such as Juliane Rebentisch. In attempting to mediate the debates with musical analysis, this second block contains more expositive, theoretical moments for sound description, and moments in which these descriptions will be articulated

with reflections on their philosophical or aesthetic consequences. With contrasting theories and musical analyses, we show that Fink's analytical tools are able to describe more precisely the particularities of techno music structures. We also show that Adorno's contributions provide a more critical understanding of the link between technique, experience and social function than Fink's theory. Thus, we conclude by pointing out where the two theories complement each other and where they become irreconcilable.

A problem that we encounter even before we begin our analysis is that the category techno is used ambiguously in various academic studies, in online music platforms and in the jargon of music producers. In some instances, techno refers to a broad and abstract range of musical expressions using electronic instruments and certain techniques such as frequency synthesis or sampling, which emerged from the post-disco movements of the late 1970s and is often referred to as electronic dance music (EDM). However, in this article we work with the conceptualisations of techno elaborated by Rick Snoman (2009) and Mark Butler (2003) wherein it is understood as a more determined genre which emerged in Detroit in the mid-1980s. This genre is defined by the manipulation and programming of specific textures, which build arcs of tension and release from superimpositions of looped rhythmic lines (Snoman 2009: 284–5). It is also characterized by a regular, four-on-the-floor kind metric, which can appear clearly in a gradual process over a pulse of 125-150 BPM (Butler 2003: 144–6). We begin with this second concept of techno, but in the course of our writing and by means of technical descriptions of the music, we aim to specify and determine to a greater degree the object of this study.

## THE FUNCTION OF MUSIC IN CONSUMER SOCIETY

It would be possible, even if only for a moment, to place Adorno's and Fink's proposals at antipodes. Where the first can find regressive and violent forms in the experience of music within the framework of the cultural industry, the second finds moments of liberation, expression and vivification of the desire that new subjectivities of the time require. Where Adorno denounces the manipulative and alienating nature of musical technology, Fink shows how it is a technology that has no ethical implications, but which depends on the ways in which it is used. It seems pertinent to us to bring back and contrast Adorno's and Fink's writings to address the problem of the function performed by techno music in industrialised society. In this section we intend not only to reveal possible common moments, but also to establish counterpoints and dissonances that do not allow for a single place and function of music in society. The aim of this and the following section is to reflect on the appropriateness of Adorno's and Fink's characterisations by putting them into dialogue with the aesthetics of techno music.

## ADORNO AND THE IDEOLOGICAL FUNCTION OF NATURAL LANGUAGE

The questions that Adorno raises to understand the function of music in society take into account how music is produced, distributed and consumed under the scheme of the culture industry (Adorno 1976: 39–54). Adorno recognises that the complexity of its function

cannot be summed up as mere entertainment, nor can it refer directly to its effect, i.e. to the subject's reactions. The author understands that music plays a central role in the construction of ideology in society, since it reinforces the meanings of the world presented by the culture industry. Its function should be read as a "class in the general classified ad section for the world" (Adorno 1976: 44). This means that for Adorno music, mainly consumer music, would be a form of advertising that aims to show the present world as the right world, as the desirable world. This advertising is aimed at affirming the given as the best product. And Adorno makes it clear that the more mistrust there is of the given, the more necessary this advertising function becomes (Adorno 1976: 44).

The ideological function of music in the culture industry, according to Adorno, should not be traced to the explicit conceptual contents of the works, but to how the works enable an integration between the individual and society (1976: 46). This integration can be understood by means of participation in a particular language. This language is experienced in the consumption of musical commodities and facilitated by the preservation of associations between stimuli and senses, intuitions and concepts, which have been reified in automatic schemes of perception through a historical process. Adorno states that the experience of music in the culture industry is no longer that of a cognitive, comprehensive, reflective experience. Yet certain historically sedimented senses survive in music as isolated elements that are recognised by the listening subject (Adorno, 1947: 40). This historical sediment endows certain materials such as chords, timbres, melodic turns, rhythms and textures with a meaning or a concept that is, in principle, immediately experienced. These associations between stimuli and meanings are seen by Adorno as historical residues that carry a disciplinary function, enabled by fetishism in experience. This fetishism conceals the structural links between the set of elements that make up the work in pursuit of hypostatizing the individual, thus asserting an identity of the phenomenon beyond its context. By isolating each sensitive stimulus from a formal context, the listener narrows the experience to the mere task of recognising the stimulus-concept identity. And for the author, this is such an automated task that it can be done without any reflective effort. The associative tendency of the culture industry is "profoundly embedded in the public" (Horkheimer and Adorno 1989: 136).

Thus, in the consumption of the work, understanding is limited to the identification of isolated moments and their respective individual senses, rather than the formal articulation of the various moments. Adorno argues that the former is a fragmented understanding, which turns into a "worldwide musical consumers language" (Adorno 1976: 39). In this form of consumption, elements remain isolated with their own values, and the formal relations between them are concealed. This language succeeds in reproducing connections of meaning without the need for reflexive mediation due to an automatic identification by the same scheme of associations given a priori by the industry (Horkheimer and Adorno 1989: 124). But Adorno and Horkheimer acknowledge that this automatism and immediacy of experience makes such a language a kind of "natural idiom" that coerces a forced integration between the individual and society (1989: 129). In this language, individual and society

are identified by eliminating any contradiction, any unassimilable information that does not fit into the shared schema. Adorno, in an article written with the assistance of George Simpson, uses the concept of “natural language” and describes it as the set of “total of all the conventions and material formulas in music to which he accustomed and which he regards as the inherent, simple language of music itself, no matter how late the development might be which produced this natural language” (1941: 24).

That the existing is valued and appreciated for its mere existence, akin to the schema of culture, leads Adorno to link this experience with an “obeying the extant”. The ideological character of music ceases to depend on explicit content, rather it is understood by the mere acceptance of what is there, thus functioning as “the strongest glue of reality” (Adorno 1976: 41). And this obedience, this acceptance of what exists, also functions as a distraction that leads us to assimilate the world as a given, without contradictions that demand reflection. There is no permission for doubt in a scheme as automatic as a reflex. Music’s ideological function is expressed in the attempt at total integration between individual and society. As we point out, in a “natural language” where concepts fit perfectly in goods and the role of the individual is exhausted in identification, there is no room for individual mediation. Thus, immediacy in non-reflective experience is linked to music’s integrative function.

It leaves no room for conceptual reflection between itself [the society] and the subject, and so it creates an illusion of immediacy in the totally mediated world, of proximity between strangers, of warmth for those who come to feel the chill of the unmitigated struggle of all against all. (Adorno 1976: 46)

An experience limited to immediacy minimises the suffering generated by the impossibility of total integration between individual and society. This consoling function is realised through a schema, perceived as a natural language, which allows for a deceptive universal conciliation. There is consolation insofar as one becomes part of the collective voice, of a “we”, constructed as a priori objectivity. The schematism of music suggests to the individual that in what is most unique and singular to itself, such as its perception and reaction, it is “in accord with all, accepted by and reconciled with all, and that that, ultimately, is the meaning” (Adorno 1976: 50).

Adorno highlights the ideological aspect of a type of experience that dissociates the individual stimulus from its context of meaning, while associating it with an immediate meaning. This kind of experience is also linked by Adorno to a disciplining of reactions and to a special kind of social integration. The function of music within the culture industry is, following Adorno, that of “ideology in the proper sense of the word” (1976: 52). This kind of music allows the suspension of reflexive processes in order to affirm the immediately given as the correct and desirable world, hence the comparison with advertising logic that helps the integration of individual and society. For without having any specific content or concept, the schema of music experience also manages to “slide into forms of subjective reactions that are psychologically more deep-seated than manifest ideological contents and may therefore surpass their effect” (Adorno 1976: 53).

As we analyse further on, techno music has standardised sound processes that, far from seeking formal or logical links, pursue immediate effect on the listener. Some of these effects can be the construction of tension through build-up, or the feeling of stasis through breakdowns. These processes can be perceived quickly or automatically by association with a particular effect and without any musical expertise, allowing experimentation with tension and release. This experience of tension and release also contains a strong social dimension in that it is an experience of shared feelings. These points are further explored in the section dedicated to the technique and aesthetics of techno music.

### *FINK AND THE CONSTRUCTION OF DESIRE*

There are few points of contact between the Adornian perspective and Fink's proposal when it comes to relations between the experience of music and its social function. And it is precisely this distance that at times allows us to articulate both authors without forcing a reconciliation between them. In the following paragraphs, we delve into the social function that Fink finds in repetitive music while comparing and contrasting it with Adorno's perspective. We provide more tools that allow us to interpret the specificity of the techno music experience without abandoning a critical social dimension.

Robert Fink, in his text *Repeating Ourselves* (2005), carries out a thorough analysis of the mechanisms shared between advertising technique, disco music and American minimalist music of the 1960s and 1970s. While his text deals with a diversity of genres based on repetition, there are also specific references to techno music. For the author, both the technical revolution of advertising in the 1950s and the technical development of minimalism and disco music are a search to adapt to a new subjectivity emerging from a post-war context. The new economic and cultural contexts allowed the construction of new expressions that he calls "countercultures" (Fink 2005: 68). Considering these new subjectivities, the techniques developed by the economic and cultural sectors and constituted mainly by repetition would have aimed to vivify a historically appeased desire. Fink does not link this technological development to a manipulative intention, but rather to an adaptation of technology to a new situation: the mark of a "crisis of desire" left on subjectivity by the Second World War. For the author, the function of advertising is that of stimulating consumer desire for economic prosperity. On the other hand, the function of the new explorations in music are linked to rescuing subjectivity from this "crisis of desire" with the production of "musical desire" (Fink 2005: 71–2).

Fink examines the advertising technique developed from the 1950s onwards and its specific role in creating desire in the subjects of consumer society. A central element of this technique is repetition, both within the advertisement itself and in the repetition of the advertisement in everyday life. As described in detail in the third chapter of his book, advertising is always understood as a gradual process that requires multiple repetitions to change the attitude of consumers (Fink 2005: 120–66). Advertising would never have expected that consumers

would go out and buy a product immediately after seeing the advertisement, rather there was an evolving interest that developed from exposure to repeated promotion of the same product. Frequency and continuity of presentations were central elements in the planning. By the 1960s, all parameters such as number of advertisements, time of exposure, speed and regularity of the rhythm of barrage were determined in such planning. Eventually, the author acknowledges, these same techniques would be adopted by minimal music, disco and electronic music, within his works—techniques adapted to the scale of the work and its internal construction (Fink 2005: 142–3).

We can establish a dialogue with Adorno's readings since Fink recognises in this "technology of sensation" a form of socialisation (2005: 66). The author recalls the musicologist Susan McClary, who argues that "music teaches us how to experience our own emotions, our own desires, and even our own bodies. For better or for worse, it socializes us" (Fink 2005: 96). This technology based on the repetition of the same element succeeds in building a psychic structure of expectation; the consumer learns to expect and recognise a certain kind of repetitive development. The following section goes deeper into how this technology works. For now, we are interested in understanding the function that this musical technology fulfils, according to Fink, in society.

For the author, the function of repetitive music such as disco or minimalist music can be compared to advertising in that it is a "discourse that uses structures in time to create and channel desire" (Fink 2005: 82). But, although music imitates the structural forms of advertising, it also confronts the aim of advertising. Music uses the trance-like mental states that advertising can induce not to foster desire for a product, but to create and channel desire in the experience of musical discourse. We understand that the difference, for Fink, is that the technology of sensation in music encourages meaning-making, whereas advertising seeks the desire for objects (2005: 81–2). Fink, unlike Adorno, stands aside from denouncing the manipulative uses of this technology. He does not conceive that there are natural or real desires that are deceived or manipulated by music, but rather that they are created like any desire.

Moreover, Fink does not believe that the isomorphism of minimalism and advertising strategies has ethical implications (2005: 66–7). The ethics of the technology of repetitive music depend on how it is used. He even affirms that the technology of stimulating and channelling desire can have a critical use when it "can be seen as immanent critique, transposing the world constructed by mass consumer capitalism into a sonic environment that is equally loud, overwhelming, repetitious, exciting, exhilarating, exhausting, relentless, and (sometimes) terrifying" (Fink 2005: 30).

Here, we can point out a wide divergence between the authors. Adorno does not dwell on different contents of desire, on whether desire is for an object or for a discourse. Adorno critically analyses the way in which all desires, beyond their explicit content, are stimulated to integrate the individual into social machinery. In other words, Adorno might hold that one and the same function is performed by the forms shared by minimalism and advertising.

Fink understands that this technology of sensation arises in the post-war period in pursuit of the desire for an emerging counter-cultural subjectivity, one that is faced with a crisis of desire that was first understood by the technique of advertising. But in Adorno's reading we find that the technique of advertising, the controlled repetition of the same thing, is not aimed at reaching a subjectivity that was there, but rather at enabling subjectivity to be there. In the culture industry, technique reveals itself to be at the service of the given order. It is aimed at sustaining associations adapted to the order and manipulating desire by obscuring social contradictions.

### *TECHNIQUE AND AESTHETICS IN TECHNO*

In order to rethink the social function of techno, we consider it necessary to deepen the analysis of the music and the kind of experience it enables. There are two central debates with which we articulate the technical aspect with the experience of the music. The first concerns the type of musical teleology that structures sound within techno. The second is the temporal logic it proposes. The analyses of teleology and time help us to link the technique of techno with the debates we have presented regarding its social function.

Although our work focuses on the articulation of Adorno's and Fink's ideas, it is useful to draw on contributions of those who have specifically studied techno music such as Rick Snoman, Mark Butler, Diedrich Diederichsen and Ragnhild Solberg. This allows us to include technical categories into the description of musical procedures. It is clear that the choice of a particular case for the description and analysis of an entire musical genre always involves a certain degree of injustice. But for the purposes of our work, we have selected a piece by a DJ and techno producer who in recent years has gained legitimacy by placing highest in the "Alternative" ranking of the magazine DJ Mag. De Witte won this position by having the most downloads on the platform BeatPort (DJ Mag 2021). We will examine one of her works to link debates around teleology, meaning, materials and time in techno music.

### *TELEOLOGY AND SENSE*

In the first chapter of his text *Repeating Ourselves*, Fink dwells on one of the most challenged aspects about repetitive music: teleology. For the author, the construction of the piece "as a whole" based on the coherence and directionality of the musical discourse has been one of the most praised values in Western music tradition (Fink 2005: 31). And it is this value that American minimal music, with its hypnotic repetitions, leads us to reconsider. Fink recovers various musicologists who reflect on the division between teleological and anti-teleological music. Some suggest that the lack of dialectical construction in musical discourse is linked to a psychological regression of the subject (Wim Martens 1983), to a submission to authority in terms of consumerism (Stephen Holden) or to new forms of postmodern metaphysics (Leonard Meyer). Others point to a liberating aspect in the abandonment of the teleological construction in musical discourse and find another way of



listening that requires no memory or anticipation (Michael Nyman), an anti-patriarchal and dissident experience of pleasure (Susan McClary and Richard Dyer) or a tantric-oriental way of experiencing pleasure, in opposition to the orgasmic-western one (John Rockwell).

Robert Fink moves away from these authors and argues that the division between teleological and non-teleological music cannot be reified. He argues, based on the works analysed, that the musical discourse of certain minimal music, disco and even electronic music is organised on the basis of arcs of directionality towards climatic points of tension and moments of release. According to him, these are not strictly teleological pieces, but intermediate kinds of teleologies with arcs of sense that do not necessarily coincide with the total dimension of the work. We are not dealing with a teleological sense of the piece as a whole, where each element would be significant for the construction of meaning. Rather, this teleology is about pieces in which the arc of sense becomes exhausted by a cumulative process of building tension and moments of release. According to Fink, fragmented “tension-releases” are experienced with periods without directionality in between, which the author links to suspension and stasis (2005: 45). Fink uses the term “recombinant teleology” to describe this way of constructing tension-release arcs which do not coincide with the total dimension of the piece, but which do allow for intermediate moments of non-directionality (2005: 42-47).

If Theodor Adorno uses the concept of teleology to refer to sense construction in the piece, it is not with reference to tension-release arcs. As Juliane Rebentisch points out, we might think that Adorno requires a listener “who reconstructs the music in an attentive and present mind” but is also capable of precisely articulating individual musical events in time “such that the latter become manifest in their function in the musical context as a temporal dynamic” (2012: 197–202). Again, the critical interpretation of meaning depends on the coherence established between the various elements of the work. “For Adorno, to hear means to hear construction, to participate in the composition by creating interrelations that reach forward and backward in time” (Rebentisch 2012: 203). The sense of the piece cannot disengage from categories such as coherence or causality that would emerge from the relations between the materials and their historical-immanent qualities. For Adorno, unlike Fink, the sense of the piece is not conceivable as an arc of tension-release, but as the construction of relations in time whose directionality is the sense of the piece.

The analyses of popular music carried out by Adorno together with George Simpson, which can be woven in with Robert Fink’s analysis, are highly relevant to our objective and allow us to reflect on techno music. In their co-authored article (Adorno and Simpson 1941), the authors highlight a quality of music produced for mass consumption that would differentiate it from the dialectical procedure of serious music. This quality is the standardisation of the structure of the piece as well as the standardisation of the details. In mass music every detail, every specific quality of the material, is replaceable, as the material “serves its function only as a cog in a machine” (Adorno and Simpson 1941: 19). For Adorno, in serious music the particular detail managed to refer to the totality of the piece’s sense. In popular music, on the other hand, the context in which the detail manifests itself appears as an extraneous framework.

We argue that the counterpoint we have presented between Fink and Adorno is not entirely irreconcilable. Indeed, it may even explain a certain characteristic of the aesthetics of techno. Although the authors work with different conceptions of teleology, we find that Fink's category of recombinant teleology and Adorno's idea of standardisation can mutually illuminate each other. Adorno's concept allows us to recognise the poverty of formal elaboration in pieces constituted primarily by tension-release arcs, which resign themselves to establishing temporal relations between events distant in time. But with Fink, we must recognise that techno music depends on directional processes that demand temporal relations. The dilemma could be clarified if we consider that techno music is sustained by a necessary standardisation of materials and functions that cannot be disengaged with directional processes (however short these arcs may be). What has been standardised is not only material of genre-specific sounds (an aspect that techno shares with other genres); it is these emotional arcs that techno has managed to standardise starkly. Arcs of tension-release whose strength and effect on the listener's experience depends on the internalisation of incessantly repeated schemas. For this reason we argue that Fink's recombinant teleology succeeds in describing with higher specificity than Adorno the internal processes of techno music. However, Fink's concept can only make sense from a general framework of standardisation as proposed by Adorno. It is the standardisation of the effect of these directionalised processes that sustains long-term interest in musical discourses without the need for materials to construct formal meaning beyond each 'arc'.

In our analysis, in techno music the individual sound event does not formally influence the construction of sense; material and form are not linked to each other, which leads to a loss of the dialectic between parts and whole. What is maintained is an abstract structure to be filled with a wide range of materials. This standardisation enables the construction of arches of tension-release that do not depend on the specificity of the materials.

So far, our theoretical reflection is based on the interweaving of literature and techno music. It is now time to consider technical aspects of techno music to determine more precisely the mutual implication of recombinant teleology and standardisation. In the following section we focus on certain formal and structural aspects of techno music that require the articulation of the concepts we have proposed here.

### *RECOMBINANT TELEOLOGY AND STANDARDISED STRUCTURE IN TECHNO*

The structure of techno cannot be conceived as a succession of verses and choruses, nor can it be fully understood from the harmonic language of tonality, two aspects that Adorno recognises as fundamental in popular music. Mark Butler studies the structures of electronic dance music, and we will integrate some of his fundamental categories to mediate them with Adorno's and Fink's critiques. Butler (2003) argues that electronic music presents a formal organisation structured in modules, each with a standardised function. We develop Butler's categories in the analysis of the piece called "There's no one left to trust" by Charlotte De Witte (2020), a renowned techno music producer. This track is relevant for our analysis not

only because it is the second most popular of De Witte's works according to Spotify data, but also because it is particularly schematic.

The first eight bars of the track (00:00–00:27) present little textural and chronometric density and have two main elements. A kick marks the pulse with a short sound devoid of tonic quality, but with preponderant bass (sub-kick) and middle frequencies. In the background there is a sustained noise with filtered frequencies. The same sound configuration appears in the last eight bars. The beginning of the piece and the end are largely identical; the only difference is that at the end of the last eight bars a spoken voice is introduced, pronouncing the name of the track. Beginnings and endings with these characteristics (clearly marked pulse, few materials and weak tonic information) are commonly found in techno as it is useful for beat matching (Butler 2003). Beat matching is a technique that aligns the tempo of the concluding piece with that of the incoming piece, allowing for the succession of tracks without an obvious interruption for the listener. We can recognise that this structural moment of the piece responds to an external purpose: the need to be easily articulated with other tracks in order to build the continuity characteristic of presentations in festivals, which can last for days on end.

In the following moments (00:28-01:25) we find a procedure already recognised by Robert Fink in his analysis of minimal music and disco works of the 1970s, and declared by Butler as a characteristic procedure of electronic music. It is a technique that consists in adding elements that are iterated and layered consecutively. The duration of the repeated element can be a pulse, a bar or a set of bars. In the first instance (00:28-00:57), these elements are short white noises in sixteenth notes that accentuate the counterpoint. In the second one (min 00:57-01:25) an inharmonic sound, whose rhythmic cell differs from the rest by repeating itself every single bar.

This accumulation of materials is followed by a process of elimination of low frequencies, which contrasts sharply with the texture of the first moment. This elimination of low frequencies begins at 01:25 and ends with the removal of the kick at 01:32. This module (01:25-01:39), which consists of a reduction in the number of elements in the texture, mainly the removal of the kick, is understood by Butler as a “breakdown” (Butler 2003).

The processual arc concludes with an abrupt change of texture (01:39) when the kick and low frequencies are reintroduced and several high-frequency elements are subtracted. The section characterised by this re-entry of the kick is what Butler calls the “drop” or “dropping the beat” (Butler 2003: 415). Then a new arc of tension begins (01:39-3:48), which we could characterise as the main one. In this process, the chronometric and textural densification, the filtering of low frequency bands and the intensification of high frequencies construct what Butler and Fink call build up, an arc of increasing tension. The build up is longer than the previous sections and incorporates new material. This material is the first that has clear tonic content (F#3). It begins with low intensity in a two-pulse loop. In general terms, we can observe that the arc of increasing tension (or build up) consists of re-presenting the materials already introduced in a processual accumulation that densifies the texture. Towards the end of the arc, the low frequencies are eliminated and the high frequencies,

which consist of violet noise, are intensified. Because of the degree of tension built up at the end of this arc, we can say that this is the peak of the work. And this arc concludes with a new drop which, being located after a peak in the tension and volume, Butler would call a “core” (2003: 286-290). In other words, the core can be understood as the main drop of the piece.

In her article “Waiting for the Bass to Drop” (2014), Ragnhild Torvanger Solberg seeks to clarify the links between the emotional experience of listeners and the production techniques of electronic music. She argues that emotional experiences of suspense and tension reach their peak in the modules we call build up, before concluding in the drop. And, according to her study, the moment of the drop corresponds to reactions such as more movement of the bodies on the dance floor and greater feelings of ecstasy and euphoria (Solberg 2014: 78).

Some techno pieces are structured by relatively independent modules with standardised functions: the beginning and the end of the piece function to integrate with other tracks; the build up modules gradually accumulate tension; the drop after the peak that works by releasing the tension, coinciding with the climax of dancing and ecstasy; and the breakdown is a contrasting moment that allows a reduction in texture and chronometric density, generating the conditions to begin an arc of tension. This procedure of constructing arcs by modules has been around, as Fink points out, since the minimal music of the 1960s and 1970s. These arcs are gradual processes that build expectation towards a climax, although they do not disappear at the climax. The tension is not released at the end of the work, but “dispersed across a greatly extended time field; distributed across repetitious, gradually changing cycles; and prolonged through interlocking polyrhythmic pulsations” (Fink 2005: 134).

Adorno’s observation concerning the form of popular music is also relevant to techno (Adorno and Simpson 1941). Having a modular structure with standardised procedures responding to a function, the details or specific qualities of the materials do not become significant in determining formal relationships. Moreover, the particular sounds of each track could be replaced by analogous sounds from other tracks, and the function of each module would still remain effective. Butler points out in his work that it would not be possible to subsume all the pieces into an identical succession of modules, as the order of the modules may vary in each example. But this might also related to what Adorno called pseudo-individualisation, which he observed in the mass production of popular music. This simple rearranging of modules endows popular music with a certain “halo of free choice” and variety (Adorno and Simpson 1941: 25). This artisanal character would make it possible to conceal the similarity with the rest of the musical products while fulfilling the functions of standardised modules.

In summary, following Adorno, we argue that the effectiveness of the processes of techno music, that is, the listener’s experience of tensions and releases, could not be guaranteed without a framework of standardisation. Fink’s contribution allows us to understand with greater specificity how a recombined teleology of tension-release arcs is constructed on the basis of this standardisation.

## TIME

Diedrich Diederichsen reflects on the relationship between techno and time, pointing out that techno is “one of the most radical and successful ways of fooling people into believing that they are participating in an abolition of time” (Diederichsen 2011: 94; author’s translation). He even frames techno within a subcultural tradition that “has always sought to mock time” (Diederichsen 2011: 94; author’s translation). For this author, it is the time of life experience that seems to be suspended, allowing the hours to pass without notice. This is due, according to Diederichsen, to the lack of external references in techno music. As there is no dramaturgy, no linguistic content, no specific historical reference and no harmonic progression, any external association to the sound is eliminated, generating particular conditions for the opacity of chronological time. The author mentions a biographical anecdote in which the eight hours of dancing were condensed, in his perception, into a single one (Diederichsen 2011: 94).

Other authors have not dwelt on the individual effects linked to time, but have tried to reflect on how or what kind of time develops within the music piece. In this sense, Adorno’s reflections on time in the work continue to be discussed today. But what kind of time is present in techno, where the repetition of the identical organises both the smallest cell and the entire structure, where the materials remain identical throughout the piece, where the cycles of tension-release are potentially infinite?

Adorno points out mockeries or parodies of time in some of Stravinsky’s works (1998: 145–75). Adorno criticises the static complexion that results from the lack of causal relationships between materials in Stravinsky’s works, where the structure imposed from the outside overrides the material’s dynamic impulse. When the piece depends on an abstract form given in advance, when it is not the development of materials and their relations that give sense to the work, we follow Adorno in understanding that time is also static. For the philosopher, the becoming of sound is attached to time, to the succession of relations:

As a temporal art, music is bound to the fact of succession and is hence as irreversible as time itself. By starting it commits itself to carry on, to becoming something new, to developing. What we may conceive of as musical transcendence, namely the fact that at any given moment it has become something and something other than what it was, that it points beyond itself – all that is no mere metaphysical imperative dictated by some external authority. It lies in the nature of music and will not be denied. (Adorno 1998: 150–1)

For Adorno, music and its events are determined in time through the qualities of before, now and after, and through their relationships (1998: 150–1). Thus, it is the temporal disposition of events that shapes the course of time that endows music with content. The manic repetition in Stravinsky’s music would deny this. We can understand musical form as an integration in time of the musical content, as a process of synthesis that establishes dynamic relations between the elements. So without relations, without causalities, as we observe in techno, musical time is abstractly denied and disappears from the work.

In techno, as in Stravinsky, we can find recombinant teleology, but the structure guarantees static units in which the materials are not formally engaged with each other. The

lack of formal relations is replaced by a structure of impact whose purpose is the arc of effects and reactions of the listener. In this sense Diederichsen's approach can be strained, for the internal musical time of the work is replaced by the time of the subject's life experience, a time necessary for the technical procedures to affect the listener's state.

However, as Rebentisch (2012) points out, musical sense and formal coherence are not always identical. For this philosopher, musical elements can fulfil different functions and even change their function over the course of aesthetic experience. The relationships between the various moments of the pieces do not have a fixed relationship that can be reduced to concepts of coherence, which would essentially already be given in the score. She argues that the meaning of the work cannot be realised in an abstract time; it depends instead on the time of the acoustic process, so that art "can generally not be objectified independently of the performative perspective of the subjects of aesthetic experience" (Rebentisch 2012: 207). The author seeks to explore the tension between objective, chronological time and the non-linear time of the aesthetic experience.

'Musical time,' conceived as genuinely aesthetic time, is not identical to the objective time of its chronometric duration; nor, however, can it be confined to a coherent formal structure. It is unleashed, time and again, in the subjective processes of aesthetic experience. (Rebentisch 2012: 208)

We argue that Rebentisch's proposal succeeds in solving some of the problems that arise from Adorno's and Fink's theories when analysing techno music by getting a central aspect of time right. This is because she differentiates between two temporal dimensions. On the one hand, the time of the aesthetic experience, and on the other, the time of the sonorous unfolding. The time of the aesthetic experience is potentially infinite because the relations between musical moments are also infinite. The time of the sound, on the other hand, is that of the finite duration of the piece. Rebentisch distances herself from Adorno as she does not conceive that the unfolding in chronological time is the criterion that should give meaning to formal relations. It is possible that techno might contain a reflection on time that is an honest representation of Rebentisch's thought. Procedures such as the loop, the minimal variations, the atomisation of moments, lack of construction and hierarchical of rhythm over melodic discourse expose the contradiction between the internal time of aesthetic experience and that of sounds (Rebentisch 2012: 209). In this sense, the author allows us to highlight the critical aspect of the experience of techno music, insofar as the latter succeeds in expressing the contradiction between these types of time.

### *CONCLUSIONS ON THE NATURAL LANGUAGE OF TECHNO*

Ecstasy, euphoria, pleasure, identification with the sound, the feeling of unity with the music and the group are parts of the experience of techno music and make up a highly complex phenomenon for any theoretical approach. This paper aims to elaborate a possible articulation between a technical techno dimension and a certain social dimension of the experience. Without pursuing an exhaustive interpretation of the phenomenon, we have

found a significant contribution from the contrast and complementarity between Adorno and Fink. Where Fink finds a liberating aspect, a possibility of manifestation and creation of desire or an expression of an emerging new subjectivity, Adorno finds the inner fibres of a mechanism of social domination and alienation. However, we have also shown that the authors can complement each other by constructing a more precise and complex reading of techno music. In the following, we will present the central points of the paper's conclusions in a summarised form.

Robert Fink and Mark Butler allow us to delve deeper into specific technical procedures found in techno. Fink's concept of recombinant teleology accounts for a technical construction that generates an expectation of a particular development, which Adorno did not find in the music of his time. Expectations no longer rest on the resolution of tonal tension or on the schematic structuring of regular or cantabile melodies. Rather, they are sustained by arcs of tension built by an increasing textural and chronometric density and the progressive increase of high frequencies. And it is these arcs that incite the listener's desire for release of that tension. In this sense, Fink points out that this musical desire, a desire for musical discourse, is fostered and enlivened by repetitive music. Fink allows us to decipher the technology of sensations of a new teleology that vivifies desire and pleasure, and whose social function can be read as the expression and vindication of a new emerging subjectivity. In this sense, the abandonment of the traditional musical teleology would have a liberating character, enabling the development of a new type of desire and pleasure.

Following Adorno's thoughts, we were able to recognise that techno can, in a particular sense, suspend the formal construction or the temporal becoming of musical causality. A technique that disregards causal logics would succeed in reducing the experience of music to the immediate effect of the present stimulus that is detached from its musical context. The automatic association between the stimulus and its effect, without the need for reflexive mediation, is the basis for the experimentation of that "natural language" examined by Adorno. This natural language can, in concrete terms, be found in techno as the association between a process of accumulation as found in the build up, and the lived experience of rising tension, euphoria and ecstasy as reported by Solberg. Techno is a natural language since it allows for an identification between the subject of listening and the music, where the experience is reduced to an automatic reaction to the stimulus, devoid of reflexive mediation. It is this unity between stimulus and effect that Adorno critically analyses, acknowledging the operation of socially standardised schemes which are the reproduction of historically learned associations. Adorno, unlike Fink, recognises in this unity an ideological aspect, an integration and unity that ignores the irreconcilability of sound, its effect and its concept. It is possible to understand the ideological function of music insofar as it enables the integration of the individual and society by means of participation in a language perceived and experienced as natural.

We argue that both authors recognise a collective encounter expressed in the same schemas that function in the experience. Although the authors deduce different social consequences from this, both would agree that a collective encounter in the schemes of perception and identification associated with the pleasurable experience of immediacy

is part of the social function of techno. The experience of this natural language cannot be understood as mere entertainment or as a source of energy for work, as Adorno and Horkheimer argued. It is rather a moment of an ideological experience that consoles the subject in a deceptive reconciliation with society and with music. In a fragmented society, the individual achieves a moment of identification with the objectivity of music and with the collective voice. Their shared standardised reaction of plenitude, of ecstasy, can finally be understood as compensation for social fragmentation. And in this sense, we suggest that Fink and Adorno could agree part of the social function of techno is to construct a space where difference is suspended in favour of unity.

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