

Mutation Materialized: The Concept as Method

Rosa Stilgren¹

Abstract

Concepts have been disregarded from posthuman studies as static entities that constitute and reinforce anthropocentric categories. This article explores how concepts can be used as methods, investigating the intersection between posthuman theories, media studies and algorithmic audio production. Following Mieke Bal's framework of concept-based methodology (Bal, 2009) as source of inspiration, this paper explores how concepts work as socio-material entities to analyze specific arrangements, exploiting the concept's multiplicity (Deleuze & Guattari, 1994) defining the concept as an agent that "works" (Slaby et al., 2019). Thereby acknowledging that the concept itself will not be unaffected by process of analysis. The article focuses on the concept of mutation as an autonomous process of being and becoming that identifies specific transformations in digital audio production, illuminating the interplay between concept-ualization as normative systems of being and concept-ing (Taylor et al., 2023) as active processes of becoming.

Keywords: Methodology; Concepts; Posthuman Media Studies; Mutation; Digital Audio Production

Introduction

This article investigates the implications of thinking through concepts as processes that affect and are themselves affected by material practices. I suggest that a reconfiguration of concepts as socio-material entities is particularly constructive for exploring the intersection between posthuman theories, media studies and algorithmic music production.

I explore this intersection through the perception of concepts as interdisciplinary tools of intersubjectivity (Bal, 2009), opening up a field in which concepts are constituted as multiplicities (Deleuze & Guattari, 1994) that co-evolve with objects rather than seeking to explain them. Instead of concept-ualization – here understood to mean the practice of turning abstractions into simple definitions that describe phenomena – this article discusses and elaborates on the alternative practice of “concept-ing” (Taylor et al., 2023). The concept is perceived as an socio-material agent that works (Slaby et al., 2019).

Through an illustrative analysis of sidechain compression in digital audio production – the process of changing a sound's or composition's dynamic range in relation to other signals – I argue that the concept of mutation contributes to new understandings of digital practices through a constitutive co-creation between concept and practice. Mutation, in this context, works to highlight the transformational process of intra-acting signals that dynamically moves back and forth between tool and effect. It facilitates, enacts, and affects the process by engaging with the digital sidechain

* This article was published through an open-access model that charged no article processing fees.

¹ Rosa Stilgren, Roskilde University, Denmark. E-mail: rolost@ruc.dk.



compressor in a perpetual state of being and becoming. I thereby suggest a perspective in which concepts engage with and modulate the object's material, discourse, and practice.

Understanding dynamics between concepts and practices as interrelated processes means that the analysis can be understood in two directions: on one hand, it investigates the sidechain compressor through the concept of mutation as autonomous processing and on the other, it highlights how the particular practice of sidechain compression enacts and calibrates the concept of mutation.

The interdisciplinary field of posthuman studies are continuously challenged by operating at the intersections between the grand narratives of traditional disciplines, building on their insights whilst resisting their anthropocentric ontologies. In order to overcome reifying dichotomies that characterize much of traditional disciplines' way of thinking, the posthuman confers with process ontology in which the posthuman subject is described as always in flux. As a linguistic strategy, posthuman concepts are therefore themselves fluid, transformative, and adaptive. The problem is that this fluidity makes them susceptible to ontological decontextualization (Sylvia IV, 2021).

Sylvia (2021) states that certain posthuman concepts have become implemented in media studies but have been used selectively without attending to the ontology and criticism embedded in these concepts. He describes how Deleuze's concept of assemblages cannot be used without adapting to Deleuze's critique of enclosed subjectivity. Sylvia notices how media studies have tried to assimilate posthuman concepts back to anthropocentric ontologies (142). This requires a new approach to ontologies in which media becomes one part of analytical assemblages. Throughout this article, I argue that a concept methodology enables this new approach to ontologies.

Posthuman terminology – mutation stabilized

Ferrando (2012) argues that the overcoming of dualisms that the posthuman paradigm entails includes that between theory and practice: "Posthumanism is praxis; it has to be comprehensive in its contents as well as in the way such contents are explored" (9). Similarly, Braidotti (2002) notices that thinking of separate entities is easier than imagining the flows that connect them: "The fact that theoretical reason is concept-bound and fastened upon essential notions makes it difficult to find adequate representations for processes, fluid in-between flows of data, experience and information. They tend to become frozen in spatial, metaphorical modes of representation which itemize them as 'problems'" (2). From this perspective, concepts are entities that hold theory together. They encapsulate and reinforce hegemonic thinking. Although I do agree with the ontological implications of Ferrando and Braidotti's statements, I do not conceive processes and concepts to be oppositions. Instead, I argue that concepts exist as dynamic entities working in the intersection between concept-ualization as "spatial, metaphorical modes of representation" and concept-ing as processual becoming. They are both theory and practice.

In order to represent processes and circumvent theory, posthuman theories have constructed speculative terminologies drawing on concepts from science fiction, technoscience and biology. As Braidotti (2006) argues the turn towards "minor" or marginalized genres as science fiction and cyberpunk creates the ideal framework for imagining and engaging with the otherness of the posthuman (204-205). These fluid, open-ended concepts have been particularly applicable to posthuman terminology because they fit the processual ontologies of assemblages that value relations over substances. An example is the articulating and imagining of the posthuman through the cyborg as a being of fiction and reality, machine and organism (Haraway, 1991).



Another concept, closely related to the cyborg, is mutation. It has been effectively applied because it has close connections to bodily figurations, envisioning transformations of flesh-bodies turning into mutants. These imaginations circulate within what Rutsky (2007) calls a “bio-cultural model” (103) in which biological references work to represent and envision cultures as complex systems of distributed agencies. As the body radically changes through the randomness and unpredictability of mutation so must culture. Mutation has become the link between the human body and culture, and the otherness of “minor” genres.

However, it hardly seems controversial to suggest a human-machine-hybrid in the current mediascape of technologies that turn populations into data points, intimately connecting through and with algorithms. The “minor” genre of science fiction has become mainstream, cultivated by popular fictions of mutants, superheroes and metahumans (Rutsky, 2007) but also literal technological manifestations as avatars and chatbots. For instance, the backlash against large language models like Chat-GPT, reducing them to “parrots” (Hayles, 2022, 22) are more concerned about the potential loss of human autonomy than the technology itself. The black boxed processing between input and output set off conceptual frictions and new dynamics between concepts like automation and intelligence, language and coding. When chatbots become subjugated to human control as stupid machines it is an act of power and an unwillingness to recognize the randomness of mutational processing, accepting intelligence to be a distributed feature. As Rutsky notices the ongoing imagination of mutation as change has come to represent “human self-empowerment” in the attempt to control the complexities of technoculture: “bodily mutations, transformation of consciousness, and historical breaks are all *humanized*, made subject to the same rhetoric of human mastery and technological empowerment that has for centuries defined Western culture and its notion of the human subject” (Rutsky, 2007, 106). When mutation becomes interchangeable with change, it subordinates its autonomous processing to the metaphorical mode of representation through concept-ualization, articulating it as a logical progression from body to body-upgrade. Instead, scrutinizing and actively using mutation as concept facilitates, enacts, and affects this change by engaging with its medium from its superposition of being and becoming. It becomes a transformative force. To understand exactly what concepts do, I turn to the sidechain compressor as the medium in which mutation can be instantiated.

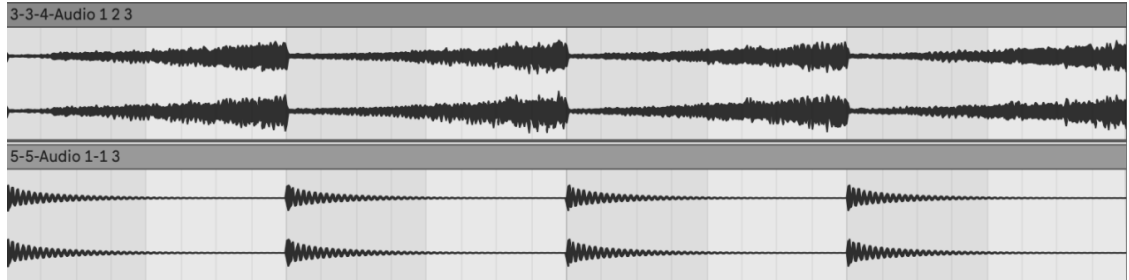
Concepts as co-creations within media studies

The introduction of the digital audio workstation - the software application for producing, sequencing, recording and editing sound through a digital interface - transformed and assimilated analogue oscillations to digital coordinates. This change has challenged perceptions of musical representations as contemporary productions position themselves at the intersection between analogue and digital landscapes, between physical and virtual realities. These digital arrangements are subject to fluid processes of constant mutations, creating intersections between different materialities where analogue instrumentations transformed into digital icons merge with the fluidity of data streams and algorithmic plasticity and thereby become continuously disconnected and reconnected into new arrangements.

The sidechain compressor works within the digital audio workstation and controls a sound’s dynamic range in relation to another signal. For instance, every time a kick occurs it activates the compressor to reduce the volume signal of another sound in order to create dynamic control between differing signals. This process “cleans up the mix” which means that all sounds of a

composition are combined and positioned in relation to each other. This function is controlled by a threshold.

Figure 1. Sidechain compression: the upper soundwave is controlled by the lower sidechain trigger signal.



However, this is not the only operation it has. In recent years, experimentation with over-exaggerating the sidechain compressor or applying it to whole arrangements, and not merely parts of it, has created stutters or “pumping” effects. Sidechain compression works both within the mix, as a tool to make audio clearer, and as an effect that creates the feel of continuous and effectively closing down and opening up the volume. It resolves two problems: how space can be created within compositions of differing signals, and how dynamics can be utilized to create pulse. These particular problems relate to how operations are conceptualized as tool and effect.

Manovich (2001) suggests that the radical change in the media landscape from consisting of material objects to digital mutable data requires a new approach to the theoretical conceptual work. He argues that the increased computerization of culture has instigated a process of “cultural reconceptualization” (47). To understand digital media as old media digitized would be to understate and overlook its most fundamental and unprecedented quality as “programmability”, the fact that everything is subject to constant editing.

He argues that one strategy for understanding this “logic of new media” is to adopt concepts from computer science: “the concept of an operation can be also employed to think about other technologically-based cultural practices. We can connect it to other more familiar terms such as ‘procedure’, ‘practice’, and ‘method’. At the same time, it would be a mistake to reduce the concept of an operation to a ‘tool’ or ‘medium’” (Manovich, 2001, 121). His statement emphasizes the culture-historical baggage that cling to concepts and their inadequacy when it comes to describing “new” materials when perceived as self-contained entities that prescribe meaning to materials. To Manovich these software operations are instead to be understood as concepts materializing. In other words, they exist outside digital environments as abstract ideas, or specific problems, and their solutions become operationalized by implementations into hardware or software.

To understand concepts as solutions materialized make them embodied actions, imperative to digital environments, that affect both the problem abstracted and the solution implemented. In short, concepts become tangible as digital operations. This suggests that the process of implementation not only addresses abstract problems but also influences the problem and solution itself. To differentiate between tool and effect therefore has important implications to how media objects are conceived because we engage with these processes of implementation. Put differently, concepts are not independent from practices. Practices are informed by concepts and concepts informed by

practices. The sidechain compressor materializes within the digital audio workstation as solution to very different problems dependent on the concepts connected to it.

Concepts are activated, then, not only with language, but in and as material. The concept is not only applied to explain matters concerning analysis of the object but collides with it. It turns into a hybrid of linguistic and material. When mutation collides with sidechain compression, it expands on the idea of mutation tweaked by the compressor's parameters. It becomes practice and practice becomes discourse that then turns on itself leading to new practices at different thresholds, appearing as different mutations. Following Deleuze and Guattari (1994), it can be argued that the mutation is immanently there but is experienced at different speeds and intensities.

The question, then, is how do we understand and articulate this process of co-creation between concept and object? How do we maintain the concept's flexibility in analysis? To explore how concepts work as agents in these co-creative processes, I examine concepts as multiplicities that work as interdisciplinary tools to account for specific assemblages.

Bal (2009) argues that concepts can dissolve interdisciplinary frictions between methodologies and knowledge practices because they establish a common ground that offers a specific and local alternative to grand narratives. She suggests that the concept should be released from systematic theory (although it should be considered), from its history or context, and instead, should be drawn into a framework with the object of analysis: "I wish to insist on the participation of the object in the production of meaning that 'analysis' constitutes" (16). To put it briefly, cultural methodology is cultural production: "Concepts are the tools of intersubjectivity: They facilitate discussion on the basis of a common language. Mostly, they are considered abstract representations of an object. But, like all representations, they are neither simple nor adequate in themselves. They distort, unfix and inflect the object" (18).

This definition points to some degree of consensus about coherence, acknowledging the concept as the abstract representation of objects. Simultaneously, it mobilizes the concept as an agent that "distort, unfix and inflect." This positions the concept as the "contact zone" between disciplines in which they facilitate the necessary dialogue (Neumann & Nünning, 2012, 4). Taylor et al. (2023) suggest that this dialogue can be enacted through "concept-ing": "Concept-ing is not a reflection, representation or a result of what was done (past tense). Concept-ing is an act, an activity, an enactment, a processual practice (in the present) and a co-creative act (for the future) that destabilizes fixities and puts theory and research back in motion" (29).

In perceiving concepts as agents that work, it no longer makes sense to ask what they are but rather what they *do* as they are flexible and subject to change, travelling between disciplines, through history and different articulations (Bal, 2002). To work with the concept methodologically, according to Slaby et al. (2019), means arranging theoretical elements and examples in specific formations. The perspective shifts from the practice of concept-ualization to concept-ing as the balancing act between representation and exploration. So how do we keep up with concepts as moving targets, continuously disconnecting and reassembling to other disciplines, concepts, and practices? How do we remain sensible to the something-new that unfolds in this process?

To answer these questions, I turn briefly to the philosophy of Deleuze and Guattari. In “What is Philosophy?” (1994) Deleuze and Guattari offer a definition² of the concept as a specific formation: “The concept is defined by the inseparability of a finite number of heterogeneous components traversed by a point of absolute survey at infinite speed” (21). Adopting this definition makes it possible to perceive concepts as processual beings that are informed and molded by their confrontation with objects. They articulate solutions to problems in specific ways. As Schmidgen (2015) notices “they operate as probes, detectors or instructions for seeing new realities, and it is only gradually that one learns what can be recognized with their help, what they show and what they point to” (124). Instantiating the concept in a medium means that this process is also materially evoked. Turning the sidechain compressor’s threshold up or down also calibrates the concept connected to it. If it is worked as a tool, it works within a culturally determined interval to control dynamics but also within certain limitations in the way its possibilities are thought out. If the threshold is operated beyond that interval, it no longer solves the issue of dynamic controls. The solution becomes something else entirely as the output becomes generative.

As stated in this paragraph, the concept is always in a state of becoming but maintains some consistency in the process. Before I delve further into the specific concept of mutation, I outline two strategies for using the concept as method. These should not be understood as prescribed procedures but instead as possible entries to analysis meaning that they work as structuring elements and not as instructions. The “confronting and colliding” strategy works to build on the conceptual framework, investigating the concept’s components and history as the loose structure of conceptualization. The strategy of “arrangement thinking” work within this framework and facilitates the process of concept-ing.

Methodological strategies

The first strategy is to confront and collide the concept with the object of inquiry. It uses the procedural concept as an active practice, a participant, that create meaning by confrontation with the object. It is in this process that the concept organizes itself, connects and disconnects. As Bal (2007) points to, it is in this process of collective “groping” (35), where we try to figure out what concepts mean that we realize what they can do. I take this a step further, arguing that with the “confronting and colliding” strategy, this process can also be material as it operationalizes through media. The “groping” is also an embodied and material experience as we intra-act with objects, trying to figure out what they can do, explore their possibilities and limitations. Experimenting with different operations, the tweaking knobs, pushing buttons, swiping screens, are all interactions with media technologies that enforce concept-ing. There is no “correct” way to manage these technologies, only standardized actions. If we go beyond the affordances that encourage certain actions, we need to reconfigure our concepts to conceive these new actions or effects.

The second strategy is that of “arrangement thinking” as it is articulated by Slaby et al. (2019). They suggest an analogy of the concept as hashtag that connect discursive elements as materialities and texts with non-discursive elements as emotions and experiences which means that they “create realities and affects, they circulate and travel to the degree that they can become independent of the original scholarly scope of their invention” (31). The arrangement thinking emphasizes the particular composition of elements that relates itself specifically to solve certain problems. It becomes possible

² I am well aware that isolating this definition seems contradictory to the philosophy of Deleuze and Guattari that resist the very idea of definitions and the practice of concept-ualization. Despite this, I have chosen to include it for the purpose of this article as it offers an alternative, flexible framework in which to understand the concept.



to draw on conceptual and disciplinary differences rather than being limited by them. The concept encapsulates these differences in arrangements of discursive beings or concept-ualisation and active compositions of becoming or the concept-ing. Within this perspective, the concept of mutation arranges the different operations in a certain way, drawing in elements as negotiations, emotions and materialities that have become materialized in the sidechain compressor.

These strategies allow the concept to be an interrelated practice that corresponds to the paradox of concept as method. It is both instructive and responsive. The concept exists in a constant feedback loop with objects. They are not self-sustainable because that would mean that they are something in and of themselves. As Sylvia (2021) argues, referencing Deleuze's thinking within thought, an affirmative approach to posthuman media studies should rethink communication as a creative act rather than transmissive (144). The concept allows us to do exactly that if we refigure our perception of the concept itself. Instead of perceiving it as a transmitter of information, we perceive it as a facilitator of possibilities. These possibilities are not limitless because they are contained within the semipermeable membranes of the concept.

I have therefore suggested that rethinking the concept of the concept itself should involve a movement from applied over being "confronted with" (Bal, 2009) to merging with, from being prescriptive to explorative. This rethinking of concepts opens up to socio-material investigations, discussions, and reflections on processes.

Sidechain as mutating surfaces – mutation mobilized

In the following section, I show how transformation and mutation activates the sidechain compressor differently. I employ the two strategies to understand sidechain compression through mutation. I investigate how the concept of mutation mobilizes and immerse the sidechain-object in different negotiations that move dynamically between mediations, as I examine sidechain compression as the act of "unmasking interfering sounds", the invisible mixing tool, and as "pumping" effect.

In music production theory, it becomes evident that the way the sidechain compressor's operations are articulated affect how it is perceived. When it is perceived as transformation it becomes a control parameter excluded from aesthetic analysis. Respectively, when it becomes effect, it produces. Brøvig-Hansen et al. (2020) describe different compression practices:

"Dynamic range processing is usually intended to change the amplitude or volume of a sound or a mix, to alter the volume relations among the different sounds in a mix, to unmask interfering sounds (via sidechain compression, for example), to narrow or expand an audio signal's dynamic range, and otherwise to create musical and aesthetic effects (such as "pumping") in a non-traditional manner" (1–2).

In this definition of dynamic range processing, Brøvig-Hansen et al. significantly differentiate between the mixing tool and the musical effect. The mixing tool implies an intent to change, to control relations between signals which result in specific outcomes. The effect creates musical and aesthetic content. From this perspective, the compressor is either-or. It is and is not musical material. The differentiation between tool and effect emerges through operation. In other words, whenever a certain threshold is lowered from unnoticeable to recognizable, it becomes aesthetic processing. The threshold acts as a gatekeeper, deciding what is allowed the status of musical material. The tool has to transform into effect.

Similarly, Hodgson and MacLeod (2014) describe sidechain compression as “lateral dynamic processing” and points to the fact that this has been mainstreamed by electronic dance music producers that “simply transformed it from primarily a transparent countermeasure against masking into a coveted and characteristic performance practice in and of itself” (106). His main argument is that the technical practices in sound recording technology is communication but that these practices remain unacknowledged as agencies to be reckoned with. Instead, they are perceived as biproducts or side effects that merely accentuate harmonical music parameters.

Though Hodgson highlights the importance of recording practices as aesthetic values, he still downplays the materiality of these practices by implicitly stating that they do in fact not represent anything new, they “simply transform” from unrecognizable to apparent. What this suggests is that the concept of transformation does not capture the cultural effects produced with the sidechain compressor within electronic dance music as they are subordinated to traditions captured within the threshold oriented towards harmonic progressions. I suggest that in order to consider these practices communicational, they must be considered in a conceptual framework that accounts for their mediation, their specific arrangement thinking, changing perspective from the transformational to the mutational.

Mutation as concept

Hayles (1999) criticizes the idea that information can be separated from materiality. The same idea that has led to transhuman conceptions about consciousness as a type of informational pattern that can easily be uploaded to computers. She argues that this dematerialization reproduces the autonomy of the liberal subject as a hierarchy between the cognitive and the corporeal. To circumvent this idea and to reinstate materiality, she connects dialectics³ of information as pattern and randomness with materialities as presence and absence. In short, information is organized and stabilized in patterns and materiality in presence. These dialectics are connected through mutation as the “bifurcation point” in which the interplay between pattern and randomness causes the system to evolve in new directions. She argues that this interruption is catastrophic as it destabilizes the system in unpredictable ways.

In order to use the concept of mutation for methodological purposes, I offer this definition: mutation exists in a double state of being and becoming as an autonomous process fueled by unpredictability. In the following section I will elaborate on this statement and explore how mutation can be understood as an analytical parameter in media studies.

The double state of existence is articulated by Hayles (1999): “Although mutation disrupts pattern, it also presupposes a morphological standard against which it can be measured and understood as a mutation” (33). It is a concept that simultaneously articulates normative standards and breaks them down in the process. To use the concept of mutation as method requires a reconfiguration of this morphological standard. As Rutsky (2007) notices, the standard is not fixed: “mutation names the randomness which is always already immanent in the processes by which both material bodies and cultural patterns replicate themselves” (111). Instead, this standard should be understood as a system of representations in which humans organize their understandings of the world. I propose that these understandings are organized through stabilized, standardized concepts. Concepts that have been subject to a sedimentation process which encapsulates and decreases their speed. Mutation, then,

³ Dialectics, within this context of process ontology, could be rightly criticized for reproducing binary thinking. This is a larger discussion that I will not pursue at this point but it is a testament to the pitfalls that posthuman approaches should navigate to avoid.



becomes a productive force in this system of sedimentation that, as Rutsky argues, is immanently there and not imposed on it as external force. It creates tension as the underlying possibility of enforced, uncontrollable changes. In this sense, mutation *is* catastrophic. It produces difference by disrupting the system, creating momentarily chaos, making us uncomfortably aware that control is an illusion. It is both a being and a becoming.

Mutation is uncontrollable, autonomous, and unpredictable. It is all of these things but cannot be reduced to either of them. In contrast to transformation as the threshold for audibility, mutation does not care about thresholds. There is no logical progression from tool to effect. Through the concept of transformation, the tool serves a purpose, it has an intended use that can generate effects. When this process is perceived through mutation, the tool becomes something else entirely. It becomes the instrumentalization of processes. Perceiving mutation in such a way gives it agency, or rather a specific formation of forces, that *act* in certain ways. It points to communication outside subjectivity, highlighting the fact that “humans are only one possible scale of analysis” (Sylvia IV, 2021, 143). Experimenting with sidechain compression is the material act of concept-ing. It enables new practices that modulate concepts in unpredictable ways. When sidechain compression is perceived through the concept of mutation, it produces difference, operated on the edge of standardized thinking. The sidechain as “lateral dynamic processing” is in fact lateral, not only in its audible outputs, but as mutation of thought. In other words, when we think of the tool as a control parameter, we subordinate its effects to human control. When we think of it as mutation, effects are distributed practices. It matters how we think practices and conceive them through concepts.

In these previous sections I have argued that sidechain compression as mutation produces difference. It works as an autonomous process, as an agent outside of human control. The tool is understood as a system of representation, a pattern, that is tweaked and modulated to the random organization of the effect. The concepts do themselves modulate to fit these new practices. In the following section, I use the strategy of arrangement thinking by confronting mutation with different mediations of the sidechain compression to explore the different speeds in which mutation moves materials: what happens to the sidechain compressor when it is thought of as a tool and respectively, what happens when it is thought of as an effect? I analyze these mediations as two arrangements: “miniature mutation” and “systemic mutation”.

The miniature mutation

When the sidechain compressor is described as the “transparent countermeasure against masking” (Hodgson & MacLeod, 2014, 106) it relates to the negotiation of space. Which sounds are identified as interfering? What system do they interfere with? The very sentencing points to a taxonomy of interrelated signals. As a traditional mixing strategy, this taxonomy is constructed by the idea of unmediated space, resembling real-acoustic conditions: “The original intention of compressors was to alter the dynamic range while leaving as little audible effect as possible” (Izhaki, 2018, 275). This is the reason why it seems transparent. But the transparent sidechain compressor is not transparent at all, but it remains unregistered as an aesthetic parameter because it operates in the system of its metaphorical mode. We understand it as tool. We have become ignorant of the difference, the dynamic subtleties in the mix that it produces, because we connect to the divide between nature and culture, perceiving it as a representation of real-acoustic environments. This representation has allowed for cultural articulations of the unmediated, organic state of authenticity. But the divide between the “real” as nature and the virtual as culture does not exist. When perceived as miniature mutation, it no longer relates to real-acoustic space, revealing that it never did. It merely simulates

how we conceive impacts of sounds resonating in physical environments. The acoustic kickdrum is impactful because it vibrates louder than an unamplified bass. It negotiates the physical and abstract dimensions of space that the concert circulates in and emerge from. If tweaked a bit above its “natural” threshold, the sidechain makes evident how the real was always the virtual by mutating from tool to effect. The mutation is always immanently there, triggered by certain digital operations. As Eshun (1998) states: “Whoever controls the effects controls the means of mutation. Effects inaugurate an alchemical era, a science of nonlinear synthesis” (011).

The systemic mutation

I now turn to the “pumping” sidechain effect as a “systemic mutation”. In this case the sidechain compressor is exaggerated “which results in constant level changes at regular intervals” (Brøvig-Hanssen et al., 2020, 1.3). It chops the whole composition into repetitive parts, creating the “pumping” effect by reducing the entire signal to its off and on states. The effect seems to crack open the composition, exposing its digital materiality as the harmonic material is assimilated to the binary codes of the machine. It is the machine’s self-referential process that exposes the arrangement as digital signal processing. In doing so, it subordinates the arrangement to digital coordinates, “the nonlinear synthesis” (Eshun, 1998), instead of harmonic progressions of analogue recordings. It disconnects itself from a continuous narrative and turns instead into mutating surfaces pulling in and out of the foreseeable and unimaginable, of its analogue past and digital future.

In doing so, it negotiates time. It mutates from dynamic control to beat control though one should be careful with the idea of control. Control, in this case, is an operation enacted through mediation and concept. The “systemic mutation” breaks with linear thinking as it works without a goal. There is no goal to be achieved. It exposes time as dynamic intertwined chunks repeating with different intensities.

The interrelatedness between miniature and systemic mutations

As argued in the previous section, the digital sidechain compressor as mutation negotiates space and time by dynamically moving between opposing concepts related to the arrangements of tool and effect: the real and the virtual, the linear and the cyclical, time and space. The miniature and the systemic are different ways of experimenting with the sidechain compressor, experimenting with the interconnectivity and relational processes of dynamic range compression. These processes draw in these different relating concepts connected to discourses, cultural practices and technologies.

The sidechain compressor is both a tool and an effect. When operated as tool to unmask, its effect becomes audible through clarified dynamics. When operated as “pumping” effect, it materializes through the tool of beat control. What the sidechain compressor produces is *difference* between our systems of representations i.e., the imitation of physical acoustics, the safety of recognizable patterns, and the unforeseeable, the “malpractice” of the tool to mutation. Understanding this difference as mutation materialized means that it can actively modify states of being as the autonomous process that interferes with these systems of thinking and signals within tracks. As Manovich (2001) states, when objects become data, they exist in numerous state. The concept methodology is therefore also a material practice that can easily be tweaked and triggered through algorithmic processing. When we shift perspective from conceiving compression as transformation between tool and effect to mutational instrumentalization, something happens. Mutation moves out its conceptualised state as change and becomes an active practice that connects to different coordinates of the digital and the discursive.



Conclusion

Throughout this article I have investigated the intersection between posthuman theories, media studies and algorithmic music production, employing concepts as methodological approaches to understand and analyze different arrangements of object, discourse, and practice. From this perspective, concepts act as co-creative processes that modulate and are themselves modulated by their intra-action with objects. I have argued that this process is also embedded in materials as they contribute to different understandings through their operations. Understood as socio-material agents, concepts work to articulate processes and flows within coherent frameworks because they are processual themselves. To do this methodological work, though, requires an awareness of the difference between concept-ualisation and concept-ing.

The concept-ualisation of mutation has made it interchangeable with relating concepts like change and transformation. I have defined mutation as “the double state of being and becoming”. In the analysis of the sidechain compression, the concept-ing involves mutation at different scales. As miniature it relates to concepts of real and virtual, accounting for the flow in between these conceptual states. As systemic it disconnects from continuity of narratives, accounting for the flow between the linear and the cyclical. The sidechain compression engages in the concept-ing as the non-verbal, non-human unit of their articulations. These specific arrangements of concept and practice help to emphasize how technology is articulated and enacted within systems of representations whilst working to disassemble the cultural forces that continuously work to throw them back into anthropocentric ontologies. The sidechain compressor becomes an instrument, the mutation materialized. It actively makes us feel the mutation from oscillations to digital coordinates, and in doing so, modulates our perception of mutation itself. But mutation is not sustainable. It exists in a constant feedback loop between object, discourse, and practice. Once identified as mutation, as the something-new, it will be structured back into the system of reified conceptual representations. What makes mutation particularly impactful is the discussions that it initiates if we allow objects the status of mutation. No matter the outcome of these discussions, what they make evident is that turning our perspective to the concept itself, activating it as a participant in analysis, opening up to new material articulations, we might end up with different conclusions than we anticipated. As Ferrando (2012) points out, changing perspective and key-words in posthuman research provides new insights. Engaging with concepts as socio-material entities that constitute the arrangements in which materials and humans intersect, not inflecting human control, but reflecting it through the image of the something new that emerges. With new media platforms that work through autonomous, black boxed processes of machine learning, the concepts connected to them become particularly important. For instance, how the hashtag affect the concept of system, as an operation that organizes content but simultaneously generates anti-system engagements from users actively using different spellings to organize outside algorithmic control (Duffy & Meisner, 2023). Thus, the methodological approach of concept-ing contribute to deeper understandings of technologies in media studies. It identifies the moments, practices or discourses that act as thresholds between standardized operations – the affordances or the perceived neutrality of technology – and the disruptive, reorganizing malpractices. What happens when we begin identifying the concept-ualization processes, realizing the human control embedded within them, and begin concept-ing? When we begin to reorganize, not only theory, but practice? In conclusion, concepts open up to new, rhizomatic understandings of practices, enable sensibilities to different materialities and pay attention to new relations as they call back on themselves. The concept as method is processual, fragmented, and disorganized. It is about reorganizing these systems of

abstractions, disassembling, and reassembling into new formations. It is the play with anticipation and unpredictability.

References

- Bal, M. (2002). *Travelling Concepts in the Humanities: A Rough Guide*. University of Toronto Press.
- Bal, M. (2007) From Cultural Studies to Cultural Analysis. *Kritische Berichte: Zeitschrift für Kunst- und Kulturwissenschaften*, 2, 33-44.
- Bal, M. (2009). Working with Concepts. *European Journal of English Studies*, 13(1), 13–23. <https://doi.org/10.1080/13825570802708121>
- Braidotti, R. (2002). *Metamorphoses: Towards a Materialist Theory of Becoming*. Polity Press.
- Braidotti, R. (2006) Posthuman, All Too Human: Towards a New Process Ontology. *Theory, Culture & Society*, 23(7-8), 197-208. <https://doi.org/10.1177/0263276406069232>
- Brøvig-Hanssen, R., Sandvik, B. E., & Aareskjold-Drecker, J. M. (2020). Dynamic range processing and its influence on perceived timing in electronic dance music. *Music Theory Online*, 26(2). <https://doi.org/10.30535/MTO.26.2.3>
- Duffy, B. & Meisner, C. (2023) Platform governance at the margins: Social media creators' experiences with algorithmic (in)visibility. *Media, Culture & Society*, 45(2), 285-304.
- Eshun, K. (1998). *More Brilliant Than the Sun: Adventures in Sonic Fiction*. Quartet Books.
- Ferrando, F. (2012). Towards A Posthumanist Methodology. A Statement. *Journal for Literary Studies*, 25(1), 9-18.
- Deleuze, G., & Guattari, F. (1994). *What Is Philosophy?* Columbia University Press.
- Haraway, D. (1991). A Cyborg Manifesto: Science, technology, and Socialist-Feminism in the Late Twentieth Century. In *Simians, Cyborgs, and Women: The Reinvention of Nature* (149-181). Routledge.
- Hayles, N. K. (1999). *How We Became Posthuman—Virtual Bodies in Cybernetic Literature and Informatics*. The University of Chicago Press.
- Hayles, N.K. (2022) Inside the Mind of an AI: Materiality and the Crisis of Representation. *New Literary History*, 54(1), 635-666. <https://dx.doi.org/10.1353/nlh.2022.a898324>
- Hodgson, J., & MacLeod, S. (2014). *Representing Sound: Notes on the Ontology of Recorded Musical Communications*. Wilfrid Laurier University Press.
- Izhaki, R. (2018). *Mixing audio: Concepts, practices, and tools*. Routledge.
- Manovich, L. (2001). *The Language of New Media*. The MIT Press.
- Neumann, B., & Nünning, A. (Eds.) (2012). *Travelling Concepts for the Study of Culture*. De Gruyter.
- Rutsky, R. L. (2007). Mutation, history, and fantasy in the posthuman. *Subject Matters*, 4(1), 99–112.
- Schmidgen, H. (2015). Cerebral Drawings between Art and Science: On Gilles Deleuze's Philosophy of Concepts. *Theory, Culture & Society*, 32(8), 123–149. <https://doi.org/10.1177/0263276415616681>
- Slaby, J., Mühlhoff, R., & Wüschner, P. (2019). Concepts as methodology - A plea for arrangement thinking in the study of affect. In A. Kahl (Ed.) *Analyzing Affective Societies*, (27–42). Routledge. <https://doi.org/10.4324/9780429424366-2>
- Sylvia IV, J. J. (2021). Posthuman Media Studies. *Journal of Posthumanism*, 1(2), 139–151. <https://doi.org/10.33182/jp.v1i2.1360>
- Taylor, C. A., Hogarth, H., Cranham, J., Hewlett, S.-J., Bastos, E., Barratt Hacking, E., & Barr, K. (2023). Concept-ing with the gift: Walking method/ologies in posthumanist research. *Journal of Posthumanism*, 3(1), 13–31. <https://doi.org/10.33182/joph.v3i1.2715>

