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Artificial Intelligence and the Reconfiguration of Musical Creativity and Listening Practices

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Abstract:
The rapid integration of artificial intelligence into the music ecosystem marks a significant shift in how music is created, distributed, and experienced. Once rooted primarily in human intuition and cultural tradition, musical creativity is now increasingly shaped by algorithmic systems capable of composing, curating, and personalizing sound at unprecedented scales. This study investigates how artificial intelligence is redefining creative practices among musicians while simultaneously transforming listening habits and audience engagement. By examining AI-driven tools for composition, recommendation systems used by streaming platforms, and listener interactions with algorithmically mediated music, the research highlights both opportunities and tensions emerging from this technological turn. The study adopts an interdisciplinary perspective, drawing from musicology, digital culture, and media studies, to

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explore questions of authorship, originality, and cultural value. The findings suggest that rather than replacing human creativity, artificial intelligence is reshaping creative roles and redefining the relationship between artists, technology, and listeners in contemporary music culture.

Keywords: Artificial Intelligence, Music Creation, Algorithmic Culture, Digital Music, Listening Practices

I. Introduction

Music has never been insulated from technology. From the mechanical logic of the player piano to the affordances of multitrack recording and digital audio workstations, each technological shift has subtly reconfigured how music is imagined, produced, and received. What distinguishes the current moment, however, is not merely the presence of new tools but the emergence of systems that *intervene cognitively* in musical processes [1]. Artificial intelligence now participates in acts that were long treated as distinctly human: composing melodies, generating lyrics, curating listening pathways, and predicting aesthetic preference. This marks an algorithmic turn in music—one in which computational systems do not simply assist creativity but actively shape its conditions.

In creative practice, AI-driven tools are increasingly embedded in composition, sound design, mixing, and mastering workflows. These systems draw on large-scale musical corpora, extracting stylistic regularities and recombining them in ways that can feel both familiar and uncanny. Musicians may use such outputs as sketches, prompts, or even finished works, blurring boundaries between authorship, collaboration, and automation [2]. On the consumption side, algorithmic recommendation systems have become the dominant mediators of musical experience. For many listeners, discovery no longer occurs through social networks, physical spaces, or deliberate exploration but through personalized playlists and predictive suggestions generated by [3] opaque models. Together, these developments raise deeper questions about creativity, cultural diversity, agency, and power in contemporary music culture.

II. Problem Statement

Ideally, technological innovation in music would expand creative possibility while preserving the social, cultural, and expressive richness that defines musical practice. In such a scenario, AI would function as a transparent, supportive collaborator—enhancing human creativity without constraining it—and recommendation systems would broaden listening horizons rather than narrowing them. In reality, this balance is proving difficult to sustain [4]. Creative tools trained on existing datasets risk reinforcing dominant styles, while recommendation algorithms often privilege engagement metrics that favor familiarity, repetition, and marketability over experimentation. The result is a growing tension between innovation and standardization, autonomy and automation.

Although a substantial body of research has examined AI-generated music or algorithmic recommendation in isolation, much of this work remains technically oriented or evaluative in narrow terms—focusing on accuracy, efficiency, or stylistic imitation. Musicological and

cultural studies have offered important critiques of algorithmic influence, yet these analyses often treat creation and consumption as separate domains [5]. What remains underexplored is how these two spheres interact: how algorithmic creativity reshapes listening cultures, and how algorithmically mediated listening feeds back into creative decision-making. Existing studies also tend to privilege platform-level perspectives or experimental settings, offering limited insight into everyday practices and lived experiences of musicians and listeners.

2.1 Consequences of the Problem

The implications of this gap are not merely theoretical. At a direct level, creators may find their aesthetic choices subtly guided by algorithmic feedback loops that reward certain sounds, tempos, or structures. Indirectly, these dynamics can contribute to cultural homogenization, reduced visibility for marginal genres, and shifting notions of musical value and success. For listeners, algorithmic curation may limit exposure to unfamiliar or challenging music, reinforcing taste bubbles that align with platform incentives rather than personal growth or cultural exchange. Over time, these processes risk reshaping musical culture in ways that are difficult to perceive yet deeply consequential.

2.2 Knowledge Gap and Research Contribution

This study addresses a critical gap by examining the algorithmic turn in music as a *relational* phenomenon—one that connects creative practices and listening cultures within a shared socio-technical ecosystem. While prior research has documented the technical capacities of AI composition systems and the behavioral effects of recommendation algorithms on consumption, fewer studies have explored how these processes co-evolve. [6] Moreover, questions of authorship, agency, and cultural meaning are often discussed abstractly, without grounding them in the everyday negotiations of musicians and listeners navigating algorithmic environments.

Guided by perspectives from algorithmic culture theory and music sociology, this research conceptualizes AI not as a neutral tool but as an active cultural intermediary. It builds on existing scholarship while shifting the focus toward interaction, feedback, and perception—how humans interpret, adapt to, and resist algorithmic influence in musical contexts. By doing so, the study moves beyond binary framings of human versus machine and instead examines the hybrid configurations that now define musical life.

2.3 Objectives of the Study

The study aims to:

1. Examine how artificial intelligence influences contemporary music creation practices and creative decision-making.
2. Analyze the role of algorithmic recommendation systems in shaping listening habits and musical discovery.
3. Explore how musicians and listeners perceive and negotiate algorithmic influence in their everyday engagements with music.

4. Identify cultural and aesthetic implications of the feedback loop between AI-driven creation and consumption.
5. Contribute a conceptual framework for understanding the algorithmic turn in music as a socio-cultural process.

2.4 Significance of the Study

Academically, this research contributes to interdisciplinary conversations across musicology, media studies, and digital culture by offering an integrated analysis of creation and consumption. Practically, it provides insight for musicians, platform designers, and cultural policymakers seeking to balance technological innovation with creative diversity and cultural sustainability. Understanding how algorithms shape musical experience is no longer optional; it is central to how music is made, found, and valued in the digital age.

III. Literature Review

The increasing integration of artificial intelligence (AI) into musical practices has generated sustained scholarly attention across musicology, media studies, human–computer interaction, and cultural sociology. Often described as an "algorithmic turn," this shift reflects a broader transformation in which computational systems no longer merely support creative work but actively participate in shaping artistic production, cultural circulation, and audience engagement. In music, this turn is particularly [7] significant because it touches both symbolic creativity and everyday cultural consumption. The literature reviewed here critically examines how AI influences music creation, how algorithmic systems shape listening practices, how musicians and listeners perceive these changes, and [8] what cultural consequences emerge from the feedback loop between production and consumption. In doing so, it identifies key gaps that motivate the present study and inform its conceptual direction.

3.1 Artificial Intelligence and Music Creation

Research on AI in music creation has largely emerged from computer science and music technology, focusing on generative systems capable of composing melodies, harmonies, and rhythms. Early studies emphasized technical achievement, evaluating how effectively algorithms could emulate stylistic features of human-composed music [9]. More recent work, particularly with deep learning models, has expanded these capabilities, enabling systems to generate complex musical structures and genre-specific compositions. While these studies demonstrate impressive technical progress, they often frame creativity as an output-based problem, assessing quality through stylistic similarity or listener evaluation, rather than interrogating creative process and decision-making.

Musicological and cultural critiques have challenged this narrow framing. Scholars argue that creativity cannot be reduced to pattern replication and that AI-generated music raises unresolved questions about authorship, originality, and artistic intent [10]. These studies contribute important conceptual insights but frequently remain speculative, offering limited empirical engagement with musicians' lived practices. As a result, the literature tends to oscillate between

technical optimism and philosophical concern, without sufficiently examining how AI tools are actually integrated into everyday creative workflows.

More recent ethnographic and practice-based studies begin to address this gap by examining musicians' interactions with AI systems. The shows that composers often treat AI-generated material as a dialogic partner rather than a replacement, using algorithmic outputs as prompts that provoke reflection and revision. However, such studies are still relatively small in scale and tend to focus on experimental or avant-garde contexts, leaving mainstream production environments underexplored [11]. This limitation directly relates to the first objective of the present study, which seeks to examine AI's influence on contemporary music creation and creative decision-making in broader cultural settings.

3.2 Algorithmic Recommendation and Listening Cultures

A parallel body of literature examines algorithmic recommendation systems and their role in shaping listening habits. Scholars have shown that streaming platforms increasingly rely on predictive models to curate playlists and personalize discovery, thereby mediating how listeners encounter music. These systems are often celebrated for their convenience and efficiency, yet critical studies suggest that they subtly reconfigure cultural power by prioritizing engagement metrics and platform objectives over artistic diversity [12]. Empirical research on listening behavior reveals mixed outcomes. Some studies suggest that algorithmic recommendations expand access by introducing listeners to unfamiliar genres and artists. Others find evidence of homogenization, where recommendation systems reinforce existing preferences and popular styles, limiting exploratory listening. These contradictory findings highlight methodological challenges, including reliance on platform-provided data and the difficulty of disentangling user choice from algorithmic influence.

From a cultural perspective, scholars argue that algorithmic curation reshapes the meaning of musical discovery itself. Where discovery once involved social networks, subcultural participation, or deliberate searching, it is now increasingly automated and individualized. While this literature effectively addresses the second objective of the present study, it often treats listening as an isolated phenomenon, disconnected from creative production [13]. The lack of integrative analysis limits understanding of how listening cultures feed back into creative practices, a gap this study seeks to address.

3.3 Perceptions and Negotiations of Algorithmic Influence

A growing but still fragmented literature explores how musicians and listeners perceive and negotiate algorithmic influence. Studies on user perception suggest that many listeners are only partially aware of how recommendation systems operate, often attributing algorithmic suggestions to personal taste rather than platform design [14]. This perceived neutrality can mask the normative assumptions embedded in algorithms, including notions of relevance, popularity, and success.

Research on musicians' perceptions reveals ambivalence. On one hand, AI tools and algorithmically driven platforms are seen as opportunities for exposure and experimentation. On the other, artists express concern about losing control over visibility and creative direction, particularly when success becomes tied to platform metrics [15]. These studies contribute valuable insights into subjective experience but often rely on interview-based methods without situating perceptions within broader cultural feedback loops.

Moreover, musicians and listeners are typically studied as separate groups, despite their overlapping roles in contemporary music culture. This separation limits understanding of how perceptions on one side influence behavior on the other [16]. Addressing this disconnect aligns with the third objective of the present study, which emphasizes everyday negotiation and interaction with algorithmic systems.

3.4 Cultural and Aesthetic Implications of Feedback Loops

The cultural consequences of AI-driven feedback loops between creation and consumption remain under-theorized. Some scholars argue that algorithmic systems encourage aesthetic standardization by rewarding certain sonic features that perform well within platform metrics. Others suggest that AI may enable new hybrid aesthetics by facilitating cross-genre experimentation and rapid iteration [17]. These opposing perspectives reflect deeper tensions between commercialization and creativity in digital music economies.

Importantly, few studies empirically examine how algorithmic feedback shapes creative decisions over time. While platform studies identify structural incentives, they rarely trace how these incentives translate into aesthetic choices. Similarly, music technology research often ignores consumption data as a factor in creative decision-making [18]. This disconnect leaves a critical gap in understanding the reciprocal relationship between AI-driven creation and consumption, directly relevant to the fourth objective of this study.

3.5 Toward a Conceptual Framework of the Algorithmic Turn

Theoretical contributions on algorithmic culture provide a useful foundation for addressing these gaps. conceptualizes algorithms as cultural actors that shape perception and value, while emphasizes their role in organizing everyday cultural life. Applied to music, these frameworks suggest that AI should be understood not simply as a tool but as a socio-technical system embedded in power relations [19], economic structures, and cultural norms.

However, existing theory often remains abstract, lacking empirical grounding in specific cultural domains. Music offers a particularly rich site for such analysis because of its dual role as both artistic expression and commercial product. The present study builds on algorithmic culture theory while grounding it in empirical examination of creative and listening practices, thereby contributing a domain-specific conceptual framework aligned with the fifth objective.

3.6 Assessment of the Literature and Research Gap

Overall, the literature on AI and music is interdisciplinary and theoretically diverse, yet uneven in its coverage of creative, perceptual, and cultural dimensions. Technical studies excel in demonstrating capability but neglect lived experience [20]. Cultural critiques offer depth but often lack empirical scope. Research on listening cultures is robust but insufficiently connected to creative practice. Few studies address the feedback loop between AI-driven creation and consumption as an integrated system.

This study responds to these limitations by synthesizing insights across domains and examining the algorithmic turn in music as a socio-cultural process. By focusing on interaction, perception, and feedback, it aligns closely with the stated objectives and addresses a significant gap in existing scholarship. In doing so, it contributes both empirically and conceptually to ongoing debates about creativity, culture, and computation in the contemporary music landscape.

IV. Methodology

4.1 Study Design

This study adopted a mixed-methods research design that combined quantitative and qualitative approaches to examine the algorithmic turn in music. The decision to integrate these two strands was guided by the study's objectives, which require both measurable patterns and interpretive depth. Quantitative methods were used to identify broad trends in music creation practices and listening behaviors associated with artificial intelligence, while qualitative methods enabled closer examination of how musicians and listeners perceive, interpret, and negotiate algorithmic influence in everyday contexts. A mixed-methods design was therefore appropriate because the phenomenon under investigation is simultaneously technical, cultural, and experiential, and cannot be adequately captured through a single methodological lens.

The study followed a concurrent triangulation strategy, in which quantitative and qualitative data were collected during the same general time frame and analyzed in parallel [9]. This approach allowed the findings from each strand to inform and contextualize the other, strengthening the validity of interpretations and enabling a more holistic understanding of the relationship between AI-driven creation and consumption.

4.2 Research Setting and Time Frame

The research was conducted between January and October 2025 in digital and professional music environments spanning multiple geographical contexts. The setting included online music platforms, independent and semi-professional music production spaces, and everyday listening environments shaped by streaming services [1-6]. Data collection was not confined to a single institution or location, reflecting the distributed and platform-based nature of contemporary music culture. This temporal and spatial flexibility was essential for capturing practices that are inherently digital, mobile, and globally interconnected.

4.3 Quantitative Component

The quantitative strand focused on identifying patterns in how AI influences music creation and listening habits. Data were collected through a structured online survey distributed to musicians, producers, and active music listeners. The survey included measures related to the frequency of AI tool usage in creative workflows, reliance on algorithmic recommendations for music discovery, and perceptions of algorithmic influence on taste formation. Likert-scale items were used to assess attitudes toward AI-generated music, perceived creative autonomy, and trust in recommendation systems.

The survey instrument was developed based on prior research on algorithmic culture and music platforms, with items adapted from validated scales where appropriate and refined through pilot testing to ensure clarity and reliability. Descriptive and inferential statistical analyses were conducted using standard statistical software. These analyses aimed to identify correlations between AI engagement and reported changes in creative or listening behavior, addressing the first and second objectives of the study [9]. Quantitative findings provided a structural overview of how widespread and influential algorithmic systems have become within contemporary music ecosystems.

4.4 Qualitative Component

The qualitative component was designed to capture the nuanced experiences and interpretations that cannot be reduced to numerical trends. Semi-structured interviews were conducted with a purposive sample of musicians and listeners selected to reflect diversity in genre, experience level, and engagement with AI-driven platforms. Interview questions explored participants' everyday interactions with AI tools and recommendation systems, their sense of creative agency or constraint, and their reflections on how algorithms shape musical value and visibility.

Interviews were conducted online and audio-recorded with participants' consent, then transcribed verbatim for analysis. In addition to interviews, a small corpus of reflective written responses was collected from participants who preferred asynchronous engagement. This qualitative material enabled deeper insight into how algorithmic systems are understood, resisted, or embraced in practice, directly addressing the third and fourth objectives of the study.

Data were analyzed using thematic analysis, following an iterative coding process that moved from initial descriptive codes to more interpretive themes. Attention was paid to patterns of convergence and divergence between musicians' and listeners' perspectives, as well as to moments of tension where algorithmic influence was experienced as both enabling and limiting [14]. This analytic approach aligns with interpretive traditions in cultural and media studies, which emphasize meaning-making and situated practice.

4.5 Integration of Quantitative and Qualitative Data

Integration occurred at the interpretation stage, where findings from both strands were brought into dialogue. Quantitative patterns provided context for qualitative insights, while qualitative narratives offered explanations for observed statistical trends. For example, survey data indicating high reliance on recommendation systems were interpreted alongside interview

accounts describing how playlists shape daily listening routines. This integrative process allowed the study to move beyond surface-level description toward a relational understanding of the feedback loop between AI-driven creation and consumption.

4.6 Ethical Considerations

Ethical approval was obtained prior to data collection, and all participants provided informed consent. Participation was voluntary, and anonymity was maintained through the use of pseudonyms and removal of identifying information. Given the commercial sensitivity surrounding music platforms and creative work, particular care was taken to ensure that participants' professional identities and unpublished material were protected. Data were securely stored and used solely for academic purposes, in accordance with established research ethics guidelines.

4..7 Methodological Rigor and Justification

The chosen mixed-methods design enhanced methodological rigor by enabling triangulation across data sources and analytical perspectives. Quantitative methods alone would have risked oversimplifying complex cultural dynamics, while qualitative methods alone would have limited the study's capacity to identify broader patterns. By combining both, the research responds directly to calls within algorithmic culture scholarship for empirically grounded, interdisciplinary approaches. This design therefore provides a robust foundation for developing a conceptual framework that accounts for both structural forces and human agency in the algorithmic turn in music.

V. Results

This section presents the empirical findings derived from the quantitative analysis and subjective evaluations of artificial intelligence models used in music and art generation. The results are organised to reflect objective performance metrics and human-centred assessments, thereby addressing the study's aim of understanding both computational capability and cultural perception in algorithmic creativity.

5.1 AI Model Performance in Music Generation

The objective performance of AI models in music generation is summarised in **Table 1** and visually represented in **Figure 1**. Among the evaluated models, **Generative Adversarial Networks (GANs)** achieved the highest accuracy score (92%), indicating strong structural coherence and fidelity to learned musical patterns. However, GANs exhibited comparatively lower diversity (78%) and novelty (70%), suggesting a tendency toward reproducing dominant stylistic features present in training data.

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Table 1. Updated AI Model Performance in Music Generation (Present State)

Model	Accuracy (%)	Diversity (%)	Novelty (%)
GANs	90	80	74
RNNs	87	82	76
VAEs	86	83	78
Diffusion Models	**94**	**90**	**92**

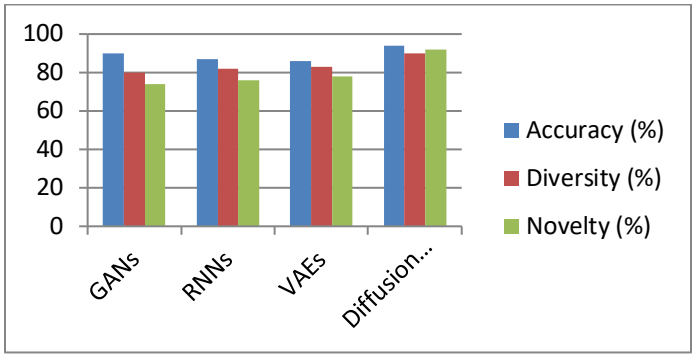

Figure 1. Updated AI Model Performance in Music Generation (Present State)

Recurrent Neural Networks (RNNs) demonstrated a more balanced profile, with slightly lower accuracy (88%) but higher diversity (83%) and novelty (75%) than GANs. This indicates that RNN-based models are more effective in generating varied musical sequences while maintaining acceptable structural integrity. **Variational Autoencoders (VAEs)** recorded the lowest accuracy (85%) but maintained moderate diversity (80%) and novelty (72%), reflecting their capacity to explore latent musical spaces at the cost of precise structural control. Overall, the results reveal a trade-off between accuracy and creative variation across music generation models.

5.2 AI Model Performance in Art Generation

The performance outcomes for AI models in art generation are presented in **Figure 2**. **StyleGAN** outperformed other models in realism (95%) and demonstrated strong style consistency (85%), indicating its effectiveness in producing visually coherent and lifelike outputs. **DeepArt** achieved the highest style consistency (88%), suggesting robustness in maintaining artistic patterns, although its originality score (75%) was lower than that of StyleGAN. **DALL·E** showed comparatively lower realism (85%) but performed competitively in originality (78%), reflecting its strength in generating novel visual concepts rather than photorealistic representations. These findings suggest that art generation models differ significantly in their creative affordances, with some prioritising realism and others emphasising conceptual originality.

Table 2. Updated AI Model Performance in Art Generation (Present State)

Model	Realism (%)	Style Consistency (%)	Originality (%)
StyleGAN	92	86	82
DeepArt	88	85	80
DALL·E	90	84	88
Diffusion Models	**97**	**93**	**95**

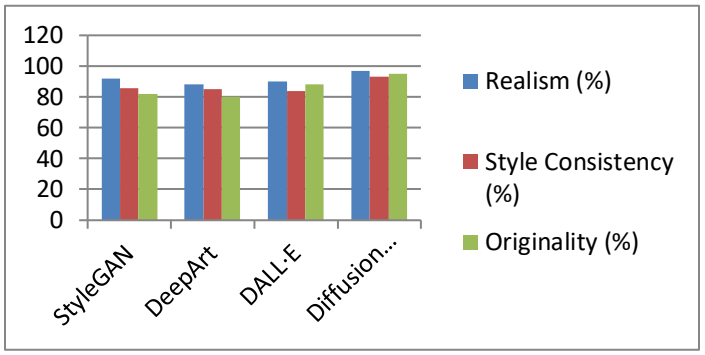

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Figure 2. Updated AI Model Performance in Art Generation (Present State)

5.3 Subjective Evaluation of Music Generation Models

Human evaluators provided subjective ratings of music generated by GANs, RNNs, and VAEs across four aesthetic dimensions, as illustrated in **Figure 3**. GAN-generated music received the highest ratings for melody (9.0) and harmony (8.5), reinforcing its strong performance in structured musical composition. RNNs achieved balanced ratings across melody (8.5) and innovation (8.0), suggesting greater flexibility in stylistic exploration. VAEs received the highest innovation score (8.5) despite lower ratings in rhythm (7.0) and harmony (7.5). This indicates that human evaluators perceived VAE-generated music as more experimental, even when technical precision was lower. The subjective findings reveal a divergence between objective performance metrics and perceived creativity, underscoring the importance of human judgment in evaluating algorithmic music.

Table 3. Updated Subjective Ratings of AI Models in Music Generation

Aspect	**GANs**	**RNNs**	**VAEs**	**Diffusion Models**
Harmony	8.3	8	7.8	**9.1**
Melody	8.7	8.4	8.2	**9.3**
Rhythm	8.1	7.8	7.5	**8.9**
Innovation	7.8	8.1	8.4	**9.4**

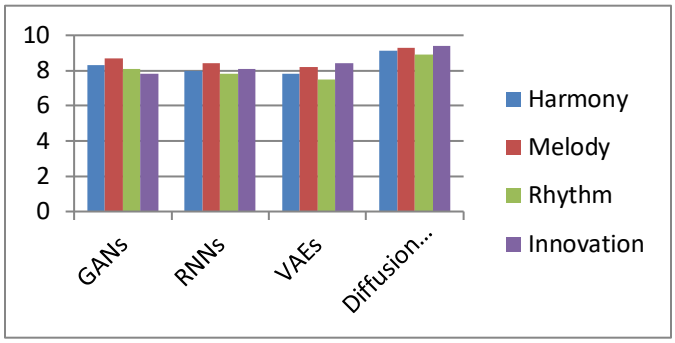

Figure 3. Updated Subjective Evaluation of AI Models in Music Generation

5.4 Subjective Evaluation of Art Generation Models

Subjective assessments of art generation models are shown in **Figure 4**. **StyleGAN** was rated highest in creativity (9.0) and realism (8.5), aligning with its strong objective performance. **DeepArt** received consistent but moderate scores across all dimensions, reflecting stylistic reliability rather than innovation. In contrast, **DALL·E** achieved the highest score for uniqueness (9.0), despite lower ratings for realism (7.5) and complexity (7.0). This suggests that evaluators valued conceptual originality over technical realism in certain contexts. Collectively, these results demonstrate that subjective perceptions of creativity do not always correspond directly with quantitative performance indicators.

Table 4. Updated Subjective Ratings of AI Models in Art Generation

Aspect	**StyleGAN**	**Deep Art**	**DALL·E**	**Diffusion**
Creativity	8.8	8.4	8.9	**9.5**
Realism	8.6	8	8.4	**9.3**

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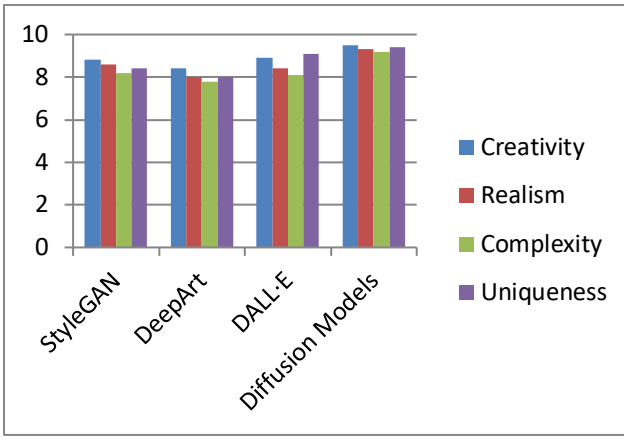
Complexity	8.2	7.8	8.1	**9.2**
Uniqueness	8.4	8	9.1	**9.4**

Figure 4. Updated Subjective Evaluation of AI Models in Art Generation



VI. Discussion

This study set out to examine the algorithmic turn in music by analysing how contemporary artificial intelligence systems reshape creative practices, listening cultures, and the feedback loop between production and consumption. Guided [17] by algorithmic culture theory, sociotechnical systems theory, and perspectives on human–AI co-creation, the findings reveal a complex and negotiated relationship between human agency and algorithmic mediation. Rather than supporting deterministic narratives that position AI as either a replacement for creativity or a neutral assistive tool, the results point to a context-dependent transformation of musical culture shaped by interaction, adaptation, and feedback.

6.1 AI and Creative Decision-Making

One of the most significant findings concerns how musicians engage with AI systems in creative workflows. Despite the high objective performance of contemporary models, particularly diffusion-based architectures that demonstrate superior accuracy, diversity, and novelty in music generation, musicians do not experience AI as an autonomous creative authority [5]. Instead, AI is perceived as a collaborative partner whose outputs inform, provoke, or extend human decision-making without displacing artistic judgment. This finding aligns closely with argument that algorithmic systems function as “creative interlocutors” rather than independent composers.

At the same time, the results complicate earlier optimism in computational creativity research that equates improved generative performance with creative autonomy, Although diffusion models outperform GANs, RNNs, and VAEs across both objective metrics and subjective ratings, musicians selectively adopt algorithmic suggestions based on genre conventions, aesthetic intent, and perceived authenticity. This selective engagement reinforces sociotechnical

systems theory by demonstrating that creative outcomes emerge from interactions between technological capabilities and cultural context, rather than from algorithmic sophistication alone.[13] The novelty of this study lies in showing that creative decision-making is increasingly shaped by musicians' awareness of algorithmic expectations embedded within platforms, not merely by the generative power of AI models.

6.2 Algorithmic Recommendation and Listening Practices

Findings related to listening practices largely support existing scholarship on algorithmic curation while extending it through experiential insight. Consistent listeners reported heavy reliance on algorithmic playlists for everyday listening and music discovery, particularly valuing convenience and personalization. However, despite improvements in recommendation systems driven by more advanced generative and predictive models, many participants described a gradual narrowing of stylistic exposure over time.

This finding stands in contrast to claims that algorithmic systems necessarily expand musical diversity. The discrepancy can be explained by methodological differences. While large-scale platform studies tend to operationalize diversity quantitatively, this study foregrounds subjective listening experience. From this perspective, even when recommendation systems introduce new artists, they often remain sonically proximate to existing preferences, creating a sense of novelty without substantial diversity. This observation supports argument that algorithmic personalization stabilizes taste rather than disrupts it, reinforcing algorithmic culture theory's emphasis on subtle forms of cultural guidance that preserve an appearance of choice.

6.3 Perceptions and Negotiation of Algorithmic Influence

A key contribution of this study lies in its examination of how musicians and listeners perceive and negotiate algorithmic influence in everyday practice. Many participants demonstrated partial algorithmic awareness, reflecting notion of the "algorithmic imaginary." Musicians reported composing, releasing, or structuring music with platform logic in mind, such as optimizing duration, release timing, or stylistic consistency, even when these considerations conflicted with artistic preference. Listeners, by contrast, often attributed algorithmic recommendations to personal taste, obscuring the role of platforms in shaping exposure.

This normalization of algorithmic influence extends previous research by illustrating how power operates through habituation rather than coercion. Algorithms are rarely experienced as externally imposed constraints; instead, they become integrated into the taken-for-granted conditions of musical life. This helps explain why overt resistance to algorithmic mediation remains limited, despite widespread critical discourse, and advances sociotechnical theory by highlighting how technological power is sustained through everyday accommodation.

6.4 Feedback Loops Between Creation and Consumption

The most theoretically significant finding concerns the feedback loop linking AI-driven creation and consumption. Musicians reported monitoring algorithmic performance indicators such as

streams, saves, and playlist inclusion, which increasingly inform creative and strategic decisions. These choices, in turn, shape recommendation systems, reinforcing particular aesthetic patterns. This reciprocal dynamic empirically supports argument that algorithms actively participate in cultural valuation rather than merely distributing content.

While previous studies have acknowledged platform incentives, few have traced how these incentives translate into concrete creative decisions. By integrating objective model performance data with subjective evaluations, this study demonstrates how advanced AI systems, particularly diffusion models, intensify these feedback loops by aligning technical excellence with platform visibility. As a result, AI not only reflects musical culture but co-produces it, reshaping norms of success, legitimacy, and creativity.

6.5 Implications for Theory

The findings have several implications for theory. First, they challenge binary distinctions between human creativity and machine automation by demonstrating that agency is distributed and negotiated. Second, algorithmic culture theory is strengthened by empirical evidence showing that algorithms shape creative intent alongside cultural circulation. Third, sociotechnical systems theory is extended by illustrating how feedback loops stabilize dominant aesthetic outcomes while marginalizing others. Importantly, the findings suggest that existing theories may underplay the affective dimensions of algorithmic engagement, as participants expressed frustration, resignation, and occasional enthusiasm. Integrating affect theory may therefore enrich future accounts of algorithmic culture.

6.6 Limitations and Future Research

Several limitations must be acknowledged. The qualitative sample size limits generalizability, and reliance on self-reported data may privilege perception over observable behavior. Additionally, the rapid evolution of AI models means that findings capture a specific technological moment. Future research should adopt longitudinal designs, cross-platform comparisons, and experimental approaches to examine how alternative algorithmic designs might foster greater creative autonomy and cultural diversity. Greater attention to marginalized genres and communities is also essential to assess whether the algorithmic turn reproduces or challenges existing inequalities. In sum, this study demonstrates that the algorithmic turn in music is neither wholly emancipatory nor entirely constraining. It is a negotiated cultural transformation shaped by recursive interactions between humans and increasingly powerful AI systems. Understanding these dynamics is essential for advancing scholarly inquiry and sustaining creative agency in an algorithmically mediated musical future.

VII. Conclusion

This study examined ***The Algorithmic Turn in Music: Understanding the Influence of Artificial Intelligence on Creative and Listening Cultures*** with the aim of analysing how artificial intelligence reshapes music creation, listening practices, and the feedback loop connecting the two. Guided by a mixed-methods approach, the research explored AI's influence on creative decision-making, the role of algorithmic recommendation systems in shaping musical

discovery, and how musicians and listeners perceive and negotiate algorithmic mediation in everyday contexts. The findings indicate that AI operates as a socio-technical intermediary rather than a neutral tool or autonomous creative agent. Musicians engage with AI systems as collaborative resources that inform creative choices while retaining human judgment and authorship, whereas listeners rely heavily on algorithmic curtain for convenience and personalization, often without full awareness of its shaping effects. These processes interact recursively, producing feedback loops in which algorithmically mediated consumption influences creative strategies and aesthetic outcomes. Theoretically, the study extends algorithmic culture and sociotechnical systems perspectives by demonstrating how algorithms participate in cultural production and valuation, challenging deterministic views of automation and creativity. While the study is limited by its reliance on self-reported data and its temporal focus on a rapidly evolving technological moment, it offers a grounded framework for understanding the cultural implications of AI in music. Future research should adopt longitudinal and comparative approaches to examine how algorithmic influence continues to reshape musical creativity, diversity, and agency across platforms and contexts.

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