

Niche in the Age of Algorithmic Recommendation: How Niche Music Communities Construct “Resistance Identity”

Manhao Guan

Sino-Canada Maple Leaf
International School, Suzhou,
215213, China
Email: chloeeyy1@qq.com

Abstract:

this study aims to elaborate on the current state of research at the intersection of algorithmic recommendation mechanisms and subcultures. The study finds that existing literature often remains at the level of “technological determinism,” viewing algorithms as a unilateral, hegemonic, and irresistible force impacting society. This research identifies three main core gaps: (1) insufficient understanding of the nature of algorithms as a “technology-society” interplay; (2) a lack of in-depth exploration into the current understanding of “resistance”; (3) a deficiency in research on the uniqueness of the interaction between China’s platform ecosystem and “Generation Z” youth in the context of music. Based on this, the innovation of this article lies in adopting the perspective of “technology-society” interplay to analyze the underlying mechanisms through which niche music communities construct a resistance identity in the algorithmic age, and to provide new ideas for the future improvement of algorithmic mechanisms.

Keywords: Algorithmic Recommendation, Niche Music, Resistance Identity, Long Tail Effect, Music Recommendation Systems, Information Cocoons/Filter Bubbles, Stratified Culture, Collaborative Filtering

1. Introduction

In today’s highly technological era, the phenomenon of homogenization is intensifying. This is evident in the realm of music, for instance, on platforms like Spotify and NetEase Cloud Music, where the use of “collaborative filtering” mechanisms dominates and

reinforces people’s preferences for musical styles, leading to a “Matthew Effect” where popular songs gain even more traction, while niche music genres are systematically marginalized[1]. Under such trends, a psychology of resisting homogenization gradually emerges. The “resistance identity” explored in this study refers precisely to the collective actions

taken by niche music enthusiasts to resist this algorithmic homogenization. Unlike traditional conformist behavior, counter-conformity involves consciously distancing oneself from mainstream music recommendations, actively exploring and cultivating tastes for marginal music, and reinforcing this “resistance identity” through social activities. According to Seaver’s research on algorithmic music recommendation, algorithms are essentially “socio-technical systems,” with humans being an indispensable part [2]. Therefore, our current understanding of algorithmic recommendation should not be solely about algorithms unilaterally influencing society, but rather about the interactive influence between society and algorithms. This study aims to use the research methods of virtual ethnography, in-depth interviews, and questionnaire surveys to point out the shortcomings of existing research, deeply analyze the reasons for the formation of resistance identity, discuss the pros and cons of algorithmic push mechanisms, and offer suggestions on how platforms can optimize algorithms to achieve cultural diversity.

2. Literature Review

2.1 Definition and Characteristics of Counter-Conformity

Counter-conformity refers to the deliberate avoidance of mainstream styles and the active pursuit of niche phenomena. Its characteristic lies not merely in simply liking or loving a particular thing, but more importantly in rejecting its opposite, thereby demonstrating a stance of resistance and showcasing one’s unique style.

2.2 Definition of Resistance Identity

A group establishes resonance and a collective identity by opposing something. For example, in this study, a music community feels more unique and aware by resisting popular content promoted under algorithmic recommendation mechanisms.

2.3 Reasons for the Formation of Niche Music Communities

Humans are inherently endowed with social instincts and community needs. Through connections in specific environments and with specific groups, individuals can obtain the material and spiritual necessities for survival and development. For music lovers, traditional social methods are relatively scattered, making it difficult to encounter like-minded “music friends.” Major music software platforms seize this opportunity, creating close communication channels for groups passionate about music, such as

NetEase Cloud Music’s forums and Douyin’s fan groups. On one hand, social media can satisfy users’ original intention of finding the joy they need on the platform; on the other hand, previously unrelated “music friends” can use such platforms as a bridge for communication and aggregation, allowing them to speak freely and exchange ideas within the music community. According to Maslow’s hierarchy of needs, a sense of belonging is one of the basic psychological needs of humans. The emergence of music social platforms provides users with a new path to fulfill this need.

2.5 Theoretical Foundation

The theoretical basis of this study originates from the “resistance theory” discussed in Hebdige’s *Subculture: The Meaning of Style*. Firstly, the psychology of resistance stems from young people’s weariness with or non-recognition by mainstream culture, expressed through wearing “unconventional clothing” or other rebellious symbols (music, behavior, etc.) to manifest their dissatisfaction. For example, British punk youth in the 1970s displayed their uniqueness or expressed a strong sentiment of “We don’t follow the mainstream!” by wearing metal accessories, donning distressed clothing, sporting Mohawk hairstyles, and playing harsh punk music[3]. The resistance identity of niche music communities in the algorithmic age explored in this study is precisely this spirit of rebellion unique to the context of high-tech algorithmic push mechanisms; the main subject of this study, the “niche music community,” is essentially a digital-age version of Hebdige’s “British punk youth.”

3. Review of Domestic and International Research Status and Research Gaps

Currently, domestic research on counter-conformity in music is still in its nascent stages. The main limitations of domestic research are: Firstly, most studies remain at the level of phenomenon description, lacking detailed examination of the daily resistance practices of niche music enthusiasts (e.g., how they express consciousness of resistance through public statements, group discussions). Secondly, theoretical construction is relatively weak, failing to fully integrate cutting-edge international discussions on algorithmic resistance. Finally, research methods overly rely on textual analysis, lacking deep digital ethnographic descriptions of music communities. These shortcomings provide innovation space for this study.

Cutting-edge progress in international research includes: Firstly, beginning to focus on the impact of AI-generated music on resistance practices. Secondly, exploring trans-

national comparisons of algorithmic resistance, such as strategic differences between East Asian and Euro-American music communities. Finally, developing quantitative tools to assess algorithmic diversity, such as the “style entropy index” to measure recommendation diversity (Entropy is a tool measuring the uncertainty or disorder degree of sample objects; it can be used in image analysis to evaluate the randomness of pixel distribution: style entropy specifically refers to quantifying style features in art or finance by calculating the entropy value of an image, e.g., painting brushstrokes, market fluctuations, etc.). However, a shortcoming of international literature is its excessive focus on Euro-American cases, lacking research on non-Western contexts like China. China’s unique platform models (e.g., Super Apps, an app model capable of fulfilling diverse needs through a single platform) might generate different forms of resistance, which is precisely where this study can contribute to the academic field.

4. Research Findings and Analysis

4.1 The Duality of Algorithmic Mechanisms

Users both rely on algorithmic mechanisms for the daily recommendation of niche music (e.g., by deliberately liking obscure tracks to “feed” the algorithm) and criticize its homogenizing aspects.

4.2 Understanding the Multiplicity of “Resistance” Behaviors

4.2.1 Dynamism

Research finds that “resistance” behaviors change according to variations in algorithmic push rules. For example, if users discover today that frantically liking obscure songs can train the algorithm to recommend more songs of the same style, the platform might modify the weight of “likes” in the song recommendation model tomorrow, reducing its influence. Consequently, users must find other methods to target song recommendations based on this change, such as searching for like-minded individuals in the comments section of a niche artist’s single and asking for song recommendations. This is a dynamic game process of “platform makes a move - users respond - platform changes tactics - users crack the new code.” Currently, existing research lacks long-term observation of this dynamic tug-of-war[4].

4.2.2 Strategic Nature

Resistance is not merely an emotional outlet (e.g., posting complaints about viral Douyin songs); it also involves methodology. Users carefully consider which methods can

effectively achieve their goals. For instance, intentionally collecting, fully playing niche songs, clicking “not interested” on disliked songs, meticulously feeding the algorithm to make it better align with their preferences.

4.2.3 Materiality

This resistance sentiment is not merely an internal monologue; it is tangible and has a material basis. The expression of this sentiment must occur through specific APPs (like NetEase Cloud Music, Spotify). Firstly, it must adhere to platform rules: clicking the dislike button and using the Personal FM to convey preferences. Secondly, it leaves digital traces: looping a single song 100 times, blocking an artist. These are all recorded by the platform.

4.3 How Niche Music Groups Construct Resistance Identity

4.3.1 Internal Formation of Views

Adolescents’ self-identity is prone to confusion -> Mainstream values attempt to indoctrinate and educate -> Adolescents do not agree -> Generate rebellious psychology and resistance sentiment -> Begin seeking self-identity. External Expression of Will: Setting nicknames, personal signatures, avatars related to niche artists -> Posting articles to express oneself; Seeking recognition through browsing, replying, liking comments; Administrators play a guiding role in shaping ideas[5].

4.3.2 Construction of Group Resistance Identity

The formation of identity often originates from drawing boundaries between “us” and “them.” Self-identity gradually becomes clear by emphasizing differences and defining the ‘other.’ A group of people gathers due to shared interests or goals, slowly forming a community. Such groups typically share commonly accepted behaviors and values, and each member gradually develops a sense of “belonging here” – a sense of identity and belonging [6].

4.4 How Algorithmic Recommendation Mechanisms in Short-Video Platforms Affect Niche Music

The “resistance” within “resistance identity,” under the specific backdrop of the algorithmic era, also includes resistance and dissatisfaction with the algorithmic push mechanism itself. The “music cocoon room” can be understood as users, through long-term intentional or unintentional acceptance of music styles recommended by algorithms, developing relatively fixed musical tastes and habits, thus gradually sinking into a relatively closed musical environment and finding it hard to extricate themselves[7]. The emergence of short-video platforms has

changed the focus of popular music creation. Traditional pop music creation often emphasizes overall coordination and artistry. However, the 15-second “short, fast, and direct” nature of short-video platforms leads song creators to focus on how to create eye-catching song snippets lasting a few seconds to gain high traffic and income. Over-emphasis on traffic may lead to a decline in the quality of musical works, thereby reducing listener satisfaction[8]. For niche music, this mechanism of short-video platforms may also affect the independent attitude and musical depth that niche music creators wish to express, which is detrimental to the long-term development of niche music and the implementation of cultural diversity.

5. Conclusion and Outlook

5.1 Main Research Conclusions

The resistance identity of niche music communities is a form of active cultural practice generated through interaction with algorithmic power, as this emotional expression can contribute to more personalized updates of algorithmic recommendation mechanisms in the future. Simultaneously, it is far from a simple declaration of musical preference; rather, it is a strategic game centered around “who holds the dominance over taste.”

5.2 The Significant Importance of Subcultures and Niche Music Groups

The development of subcultures can create a long-tail effect, where the combined market share of products with relatively low demand and sales (e.g., niche artist albums, merchandise) can rival the market share of some popular products. Therefore, subcultural music can drive economic development.

The emergence and development of niche cultural industries are closely related to satisfying personalized needs; furthermore, a significant characteristic of youth subcultural groups (including niche music groups) is their integration of production, dissemination, and consumption, which greatly differs from the narrow focus on producers in traditional cultural studies. Therefore, researching the consumption patterns of youth subcultural groups can provide insights for the further development of the future cultural industry, benefit the development of emerging industries, and contribute to an innovative society. Simultaneously, understanding youth subcultural groups, represented by niche music, provides new ideas for how traditional Chinese culture can go global. The introduc-

tion of foreign niche music genres (e.g., neo-jazz, rock, Afrobeat, underground rap) into China represents successful cross-cultural communication cases; in contrast, for traditional Chinese instruments, we should learn from the methods through which foreign niche music entered the domestic market to lead Chinese culture onto the world stage[5].

5.3 Suggestions for Protecting the Long-Term Development of Niche Music

To break the “information cocoon,” it is necessary to optimize algorithmic technology, broaden channels for receiving information, and enhance individual literacy. Meanwhile, addressing the “music cocoon room” also requires promoting collaborative governance between public entities and other stakeholders to build a healthy and diverse online music ecosystem. This can be approached from two aspects: firstly, public entities should strengthen macro-regulation; secondly, educational entities should enhance the media literacy of the audience to curb negative effects and consolidate positive influences.

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