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Cross-cultural Communication of East Asian Pop Culture in the Context of Algorithmic Media

Ni Nan

School of Sociology and Social Policy, University of Leeds, Leeds, UK

Abstract: With the development of digital platforms in recent years, the general form of cross-border cultural exchange has changed. Systematically explore the complex cross-cultural communication of East Asian popular culture in the current era of algorithmic media. In the era of traditional broadcasting, content distribution was controlled by a few central human gatekeepers; now, under the system of cultural globalisation, data-driven, opaque algorithms are responsible for this distribution. Based on the above large-scale data analysis, the algorithms are now developing highly personalised but globally consistent cultural consumption models. This paper will examine how East Asian cultural products, such as Korean popular music, digital webtoons and cross-border dramas from Asia, are using algorithm-based recommendation systems to bypass historical geopolitical barriers and enter Western-dominated media markets vigorously. In addition, the study explores in detail the profound dual nature of algorithmic culture: while it greatly enhances the scope of cross-border dissemination and cultural hybridization, it has also introduced rigid structural restrictions and frequently favours highly sensationalised or heavily commercialised aesthetic models. Ultimately, this study believes that to comprehensively explore the future development, vast soft power potential, and inherent structural deficiencies of East Asian pop culture in an intensely digitalised world, we must first understand the absolute structural dominance of the algorithm.

Keywords: Algorithmic media; East Asian pop culture; cross-cultural communication; cultural globalization; transnational flows; algorithmic culture.

1. Introduction

At present, the complex phenomenon of global cultural exchange is undergoing a very large-scale and all-new structural transformation. In the past, the main studies of cultural globalisation have often focused on the very large power imbalances between large Western media groups and the marginalised cultures in the periphery. In the late 20th century, the movement of popular culture across the world was largely one-way, controlled by a small group of human editorial gatekeepers who mainly worked at the top of major American and European broadcasting institutions. However, with the rapid spread of the Internet and the emergence of sophisticated social media platforms around the world, the old monopoly of centralised broadcast is no longer the case.

At the heart of this deep-seated media change is an all-seeing, powerful algorithm. Nowadays, a complex and largely opaque digital ecosystem operates algorithmic sorting mechanisms that determine which cultural works gain widespread attention globally and which are effectively hidden from view. These algorithms are not just passively reflecting the existing culture of the people; they are actively creating, fiercely advocating for, and quickly spreading new models of global cultural consumption. Therefore, all contemporary studies of cross-cultural communication need to move beyond merely analysing the culture's content itself and directly examine the large-scale, unseen computational logic that enables this specific content to reach people worldwide.

In light of the above rapid changes in algorithms, the extraordinary phenomenon of the rise of East Asian popular culture abroad is a typical and representative case. In the past twenty years, cultural products from East Asia, such as Korean popular music, complex transnational television dramas, and deeply immersive digital webtoons, have successfully circumvented traditional Western media blockades and achieved extensive, unprecedented hyper-visibility worldwide. This large-scale cultural wave in East Asia has broken the historical assumption that only Western cultural products are inherently suitable for universal appeal. However, this large-scale cross-border success is not solely the result of outstanding artistic merit; it has also been achieved through an exceptionally elaborate and high-level strategic deployment of algorithmic media environments.

The first goal of this all-encompassing research paper is to explore in depth the cross-cultural communication of East Asian popular culture under the severe conditions imposed by algorithmic media. Section 2 presents a systematic exploration of the basic theoretical framework for algorithmic culture and its large-scale disruption of traditional cultural gatekeeping. Section 3 explores how East Asian cultural producers are using advanced algorithmic recommendation systems to drive a significant cross-border phenomenon. Section 4 will present the serious structural contradictions and deep-seated defects of algorithmic communication, such as pervasive cultural homogeneity. Section 5 offers all-encompassing conclusions on the final state of global digital cultural power. After a series of strict syntheses, the multiple-choice items will be used to identify which one is most likely the general cultural representative. The integration of digital platform capitalism is also advancing the shift in the pattern at an unprecedented speed. As the large-scale technology monopolies continue to seek intensive profits from all sorts of small-scale interactions, they are naturally interested in cultural products that can generate considerable and enthusiastic digital engagement continuously. East Asian pop culture has built a traditional model of active, participatory fan communities and thus aligns well with the deep-seated structural needs of the algorithmic media ecosystem. Given the substantial cooperation among passionate groups of fans

across the world and the extremely aggressive sorting functions of algorithms, the form of modern cultural dissemination is evolving rapidly; therefore, we need a new set of theories to fully grasp this trend.

2. Algorithmic Culture and Gatekeeping

In order to understand how the many cultural products from East Asia have spread across the world, it is necessary to study the theoretical basis of algorithmic media in depth first. Traditionally, cultural studies focused more on the agency of people, investigating whether the deliberate ideological framing carried out by elite cultural producers and the active, resistant decoding strategies employed by highly engaged audiences. However, the deep concept of 'algorithmic culture' urgently needs to promote an all-encompassing, foundational readjustment of the former theoretical system.

In the present day, due to the vast scale and high complexity of cultural sorting, deep classification and rigid hierarchy establishment, many have been carried out by computers. The Algorithm of a large social network is now a highly proprietary, opaque algorithm that continually scans billions of local cultural data points. A large number of highly precise indicators of user attention are continuously monitored by the complex mathematical models, such as how long a person has watched a particular video, specific click-through rates, and an in-depth analysis of the complex meanings in user comments. Aggressively aggregate this large amount of localised behavioural data to actively find deeply concealed, highly profitable patterns of cultural resonance.

Therefore, the algorithm will operate as a very strict and entirely non-human cultural gatekeeper. However, different sets of historical human editors have typically been under strong geopolitical or aesthetic influence, while algorithms only need to strive for maximum user engagement and extended platform use. The algorithm does not need to know where a video was shot, what language it is in, or the detailed cultural background of a particular scene; it only cares about one thing: whether this specific clip has a higher-than-average probability of making the user keep watching. Given the increasing disregard for traditional geographical and linguistic borders in society, a particularly unique and highly volatile digital environment has arisen that can enable deeply marginalised, non-Western cultural forms to demonstrate their superior structural competitiveness over well-funded, traditional Western media products on a massive scale worldwide.

3. Algorithmic Leverage in Cultural Flows

The large-scale, all-encompassing success of East Asian popular culture around the world has often been referred to in academic circles as the complex 'new Korean wave' or 'Hallyu 2.0', and it is inherently and fundamentally linked to this vast algorithmic structure [6]. Before the advent of global algorithmic platforms, many East Asian cultural products had failed to gain traction among consumers in the West [4, 9]. Traditional television stations were unwilling to air non-Chinese programs, and most major terrestrial radio stations did not cover complicated cross-border popular music [4].

However, East Asian cultural producers have also realised that large-scale algorithmic platforms have gone around these rigid, deeply exclusionary legacy institutions [6, 10]. By urgently changing their entire production and overseas distribution plans to align with the rules of the social media algorithm, these large entertainment companies have successfully created a large-scale, highly disruptive model of cross-cultural communication [6]. For example, the extremely detailed visual production of modern Korean pop music videos is explicitly and highly mathematically designed to meet certain algorithmic recommendation thresholds. With the widespread adoption of highly synchronized and extremely complex choreographic systems, many people around the world are creating numerous localised 'dance cover' videos. Millions of user-generated videos have flooded the algorithmic ecosystem, forcing the large-scale recommendation system to continuously place the original cultural work at the top of high-diversity, disconnected global areas.

In addition, this widespread algorithmic distribution has significantly reduced the speed and depth of cross-cultural communication [10]. When a very high-end algorithm notices that a specific East Asian cultural product is spreading rapidly in a particular local network in South America, it can immediately and strongly promote the exact same content to highly similar user clusters in Northern Europe or Southeast Asia. This extraordinary highly automated computational bridge has created large-scale, extremely synchronous global 'fandom' networks that are now completely beyond the limits of language [9, 10]. In this very complex algorithmic matrix, the East Asian cultural product can no longer be thought of as merely a large-scale regional export; rather, it has completely turned into an extremely active and aggressively viral global digital artifact, driven forward by the extraordinarily vast and incessant computational logic of the worldwide recommendation engine [6, 10]. In addition, with the construction of a very deep algorithmic cultural sorting system, the traditional idea of 'mainstream' culture has been fundamentally changed. In the era of deep-seated traditional broadcasting, the mainstream was constructed in an excessively forceful manner by a very small, heavily centralised elite who arbitrarily determined which cultural works were suitable for mass consumption. However, the deep current of algorithmic mainstays is now extremely fragmented and highly personalised. A high-precision algorithmic recommendation engine can build millions of distinct and large-scale cultural micro-mainstreams simultaneously with high intensity. In these highly localised digital enclaves, a very particular niche cultural product from East Asia can fully understand the specific visual environment of its users to create an all-encompassing and extremely immersive cultural world that is completely detached from traditional geographical and cultural boundaries.

4. Structural Constraints and Paradoxes

Although the algorithms of algorithmic media are incredibly large-scale and effective in promoting the cross-border movement of culture to a far extent, they are also an extremely complex digital environment that places significant and highly restrictive structural limitations on East Asian cultural expression [8]. Although the algorithm has facilitated extensive cross-cultural communication, it is far from an impartial democracy of cultures; rather, it is a highly commodified and extremely brutal mathematical regulation

system [3, 5].

As the primary objective of the first global algorithm is to continuously increase the immediate engagement of users, cultural content that fits a particular, easily-understood aesthetic pattern very well is given excessive weight [3, 7]. For East Asian pop culture to continue to be popular and widespread in the current "cold-and-distant" algorithm environment, it has often been required to undergo a process of "cultural odourlessness" [2, 10]. Producers intentionally strip away the highly complex and localized historical narratives or deeply nuanced, controversial political themes, and instead create visually hyper-sensationalized, universally recognizable visual tropes [9]. As a result, East Asian pop culture that has achieved widespread algorithmic virality globally is often a highly sanitized and deeply shallow depiction of the actual incredibly complex source culture [2, 8].

In addition, the extraordinary structural dependence on large-scale algorithmic recommendation presents a deep-seated vulnerability for East Asian cultural power [7, 9]. The exact same large-scale algorithm that can instantly promote a specific cultural phenomenon globally is equally capable of eliminating it altogether in a very short time by adjusting the underlying, largely inscrutable mathematical parameters, and this power rests with the huge Western technology companies that operate the platforms [3, 8]. Although East Asian popular culture currently occupies an extremely high-visibility position in the global digital space, this widespread algorithmic precociousness explicitly ensures that the fundamental rules governing the worldwide sorting system for culture—that is, the absolute sovereign power to secretly write, completely modify and rigidly enforce these basic rules—is still highly, entirely and deeply concentrated within a small number of huge algorithmic platform monopolies [5, 7]. Therefore, the algorithmic cross-cultural communication of East Asian pop culture is in fact a highly massive, extremely complex digital paradox: it has achieved unprecedented global reach while simultaneously being subject to pervasive, invisible computational control at that very same time [3, 8].

Finally, due to its relatively weak position in the structure of these algorithmic channels, East Asian cultural diplomacy is now in a precarious geopolitical situation. When the government actively promotes these extremely successful and broadly popular pop culture exports as overt, aggressive tools of soft power, it discovers that it has no genuine control over the non-transparent algorithmic distribution platforms. A large-scale, sudden algorithm modification in Silicon Valley can drastically reduce the reach of a highly successful East Asian cultural project, thereby showing that the superior computing facilities of the world have now taken precedence over traditional cultural protectionism.

5. Conclusion

The core algorithm drives the creation of highly creative works at a deep level in a powerful way. Now, sophisticated big data analysis is used to inform many decisions about the casting, stories and other styles in modern East Asian cultural products. For instance, many current digital webtoons use large-scale, extremely deep real-time algorithmic feedback to instantly change very specific parts of the ongoing story based solely on immediate, very massive deep user scrolling behaviour and highly specific deep incredibly localized comment sentiment. This instant algorithmic feedback loop has completely erased the historical division between cultural producers and cultural consumers, thus constructing a high-dynamism, purely computational model for deep cross-cultural artistic creation.

The complex cross-cultural communication of East Asian popular culture in the large-scale system of contemporary algorithmic media is a profoundly changing moment in the deep-structural history of cultural globalisation. As this all-encompassing and highly systematic analysis has explicitly shown, the absolute incredible cross-border rise of East Asian digital content has completely broken the long-standing dominance of traditional, highly exclusive Western cultural gatekeepers. By aggressively and meticulously using the extensive distribution functions of the world's large-scale, high-complexity algorithmic recommendation systems, East Asian cultural producers have built deeply unprecedented, massively high-synchronised global audience networks.

However, this extremely large force of digital culture is inherently very complex and highly structurally unstable. The algorithm is a very rigid and essentially non-human cultural mediator that promotes only heavily standardised, highly hyper-visual aesthetic models and frequently erases deep-rooted, localised cultural traits entirely. Algorithmic media has, in an astonishing way, built a global network, but it has also introduced an unforgiving mathematical restriction on the very essence of the culture that flows across this network.

Finally, to know about the future of East Asian popular culture, we must be able to move beyond outdated ideas of "purely human cultural exchange". The large-scale, deeply opaque mathematical algorithms are no longer merely passive technological instruments for global distribution; they have completely and fundamentally become the most powerful, highly active architects of contemporary global culture itself. Future academic research needs to continue probing more and more deeply the enormous, invisible algorithmic power structures that silently determine the large-scale visibility of life globally and ensure that the rapid acceleration of transnational cultural dissemination does not lead to substantial, computationally enforced global cultural homogeneity.

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