

It is evident that platforms can also exert a structuring influence on the actions of cultural workers. A number of media genres that have emerged in the context of platforms should be considered here, for example Instagram stories. Since this is essentially an audiovisual media genre, Instagram stories cannot be described as a new phenomenon *per se*. Rather, it is the specific possibilities for embellishing Instagram stories that are to a certain extent pre-figured by the specifications of the Instagram platform and that ensure recognition value or encourage users to follow certain design conventions when producing stories. These pre-configured elements include, for example, the rule that videos can only be recorded in portrait format. Furthermore, Instagram stories are distinguished by their time constraints, with content creators utilizing them to engage with followers in a distinctive, often more intimate manner than is possible with standard image or video posts.

Nevertheless, it is irrefutable that such structures and rules inscribed in technologies are never determinative of action; they can always be interpreted to some extent (Dolata 2019, 198). To illustrate: let us consider, again, the example of Instagram stories. Within a clearly defined framework, the specific design of these stories is always the responsibility of the human actors on the platform. This is an essential prerequisite for the emergence, establishment, and further development of new media genres. This would be implausible if users were not afforded the opportunity for creative interpretation of the given media genres. In this respect, platforms are also dependent on users, who develop new practices in the context of the platform and establish communicative norms that cannot be fully foreseen by the platform operators. Therefore, a recursive relationship between platforms and their users must always be assumed. On the one hand, platforms influence the behavior of users; on the other hand, users also influence the development of platforms (Duffy, Poell, and Nieborg 2019b, 2; van Dijck, Poell, and de Waal 2018, 11).

3.5 Analyzing Socio-Technical Relations in the Platform Context

The preceding sections have made it evident that the specific relationships between platforms and human actors are a central topic of platform-related research. In essence, these are *socio-technical* interactions based on the interplay between platform mechanisms and user practices. Practices of human actors that are linked to specific software and hardware configurations can become highly normalized or habitualized over time. One illustrative example is the

use of a keyboard or a touch screen, where the seamless functioning of the devices and the proficient handling of these technical artifacts by the users must be guaranteed (Schrape 2021, 33). This results in the formation of routines that would not be feasible without the intertwined involvement of human and non-human actors and that are equally contingent on both the technologies and their human interpretations.

Such socio-technical relations are also crucial in the digital spaces that emerge in the platform context and in which users interact with the platforms' algorithms and interfaces. In recent research literature, several theoretical concepts have been developed that can be used to conceptualize specific socio-technical relations in the platform context and provide an adequate terminology to describe them. The following concepts are particularly relevant for the present study: *algorithmic culture*, *affordances* of digital platforms, *algorithmic imaginaries* of platform users, and *platform vernaculars*. In each case, albeit from disparate vantage points, the inquiry concerns the manner in which human and non-human actors interact in digital spaces and the cultural practices and aesthetic objects that emerge from the socio-technical interaction processes between platforms and users.

3.5.1 Algorithmic Culture

It is beyond dispute that algorithms play a pivotal role in digital platforms. They facilitate processes such as the collection and analysis of vast amounts of data and the automated sorting, hierarchization, and personalization of content. People interact with algorithms on platforms in various ways. For instance, platform users receive algorithmically generated and personalized content recommendations. They can attempt to influence the future generation of automated suggestions by interacting with these recommendations in a targeted manner (see above). Professional content creators, on the other hand, can attempt to comprehend the algorithmic logic of various platforms to the greatest extent possible. This will assist them in developing content that enhances their prospects of maintaining visibility in the digital domain. The utilization of specific hashtags or keywords may also be beneficial in helping one's own content stand out from the crowd or disseminating it to a vast audience with specific interests that can be linked to those hashtags and keywords.

The question of what algorithms are and what they do is the subject of sometimes differing opinions in different scientific fields. In the natural sci-

ences and informatics, algorithms are understood in a technical sense and described as automated instructions that guide computers in the execution of certain tasks. In the humanities, however, the focus is not on technical details, but on the extent to which algorithms can influence social or cultural processes. *Algorithmic cultures* are distinguished by the intimate intertwining of technical and cultural dimensions. Striphas's definition, which emphasizes this interconnection, is as follows:

[A]lgorithms are best conceived as 'socio-technical assemblages' joining together the human and the nonhuman, the cultural and the computational. Having said that, a key stake in algorithmic culture is the *automation* of cultural decision-making processes, taking the latter significantly out of people's hands. (Striphas 2015, 408; italics in original)

In order to gain a fuller understanding of the role of algorithms in social and cultural contexts, it is essential to recognize their intrinsic relationship with digitalized media cultures. This relationship is not merely one-sided; rather, it is a two-way street, with human practices influencing the development of algorithms and algorithms influencing human practices. This reciprocal relationship is particularly evident in the context of platform development, where algorithm developers must observe how humans interact with algorithms in order to optimize their functionality. This is why algorithms, especially in the context of digital platforms, should not be understood as purely technical entities isolated from social contexts. Rather, they should be regarded as a constitutive component of social, digitized worlds (Beer 2017, 4). Roberge and Seyfert state:

Algorithms have expanded and woven their logic into the very fabric of all social processes, interactions and experiences that increasingly hinge on computation to unfold; they now populate our everyday life, from the sorting of information in search engines and news feeds, to the prediction of personal preferences and desires for online retailers, to the encryption of personal information in credit cards, and the calculation of the shortest paths in our navigational devices. (Roberge and Seyfert 2018, 1)

Algorithms play a pivotal role in digital spaces, contributing to the sorting and hierarchization of content. Historically, making certain information, cultural objects, or groups of people visible (or invisible) in media contexts

was the responsibility of human actors, often those in powerful positions within the media industry. While these traditional gatekeepers have not suddenly become obsolete due to the increasing algorithmization of social worlds, there have been significant shifts in cultural power relations (Striphas 2015, 396; Beer 2013, 97). It is important to note that algorithmically driven sorting and hierarchization processes do not take place independently of the worldviews of the people responsible for developing the algorithms. The development of algorithms is inevitably influenced by certain cultural and social patterns that are inherent to the technical systems created by human actors. For instance, the notion that certain groups of users are more likely to engage with certain content on specific platforms can influence the functional logic of algorithms (Gillespie 2014, 177; Cotter 2019, 898). In this context, the perpetuation of cultural hegemonies through algorithms is inevitable. Sophie Bishop posits that the field of developing algorithmic systems is still male-dominated, which means that gendered stereotypes automatically influence the way these systems function (Bishop 2018, 71). Although the exact details of these processes are challenging to reconstruct, it seems at least evident that the hierarchization of algorithmically moderated spaces is inextricably linked to the influence of human actors (Slack and Hristova 2020, 22).

The concept of algorithmic culture refers to the intricate intertwining of human and non-human actors in digital spaces. According to Slack and Hristova, “foregrounding algorithmic culture requires addressing the *connections* that constitute what matters most about algorithms: their integration into practices, policies, politics, economics, and everyday life, with consequential political, ethical, and affective meanings” (Slack and Hristova 2020, 16; italics in original). From this perspective, then, the key question is the extent to which algorithms become part of social realities, influencing human action but not predetermining it.

3.5.2 Platform Affordances

Platforms create digital and algorithmically moderated spaces in which algorithmic cultures emerge. In this environment, a variety of sociotechnical interaction processes occurs between human actors, the technologies underlying the platforms, and the artifacts required to use the platforms (e.g., smartphones, tablets, notebooks, etc.). Users are presented with a range of content that has been algorithmically moderated. The interfaces of the platforms and the respective media genres (e.g., short-form videos on TikTok, short texts on

X) offer certain courses of action which are in turn interpreted by human actors and can form the basis for creative practices. The concept of *platform affordances* explores the action-structuring potential of platforms, which can guide the behavior of users to a certain extent. In other words, the focus is on the *in-between* between platforms and users.

The term affordance was first coined by psychologist James J. Gibson, who originally developed the concept as part of his research on the relationships between non-human animals and the environment (Gibson 1979). In essence, the term refers to the options for action that a particular environment offers to a particular subject, although it is important to note that these options are not fixed but rather vary depending on the individual subject's abilities. For instance, a tree offers disparate options for different non-human animals to seek shelter, climb, or find food, despite the tree's physical properties remaining constant. Affordance is thus always to be understood as a relational category. The options for action that an object offers to an individual are neither entirely predetermined by physical properties, nor entirely socially constructed or arbitrary.

In the following decades, building upon the work of Donald A. Norman (1988) in the field of design research, the concept was further developed – especially in research on material culture. The central question is which human behaviors are more likely to occur when interacting with specific objects, and to what extent this is related to the material properties, design, and technical functionality of the objects themselves. The concept of affordance has become a central tenet in a diverse array of disciplines, including media sociology (Zillien 2008) and archaeology (Fox, Panagiotopoulos, and Tsouparopoulou 2018). It is also a key focus of research examining the agency offered to users by technical music devices like record players (Hoklas and Lepa 2015) and digital audio workstations (Bell 2015).

The term has been the subject of discussion in the field of digital platform research for some time, and it is conceptualized in a relatively broad sense. For example, affordance does not necessarily refer to the function of a single button (such as the Facebook Like button). Rather, the question is what communicative practices are enabled, challenged, or suppressed by such a button. In this respect, the term in the context of platforms refers to the “multifaceted relational structure [...] between an object/technology and the user that enables or constrains potential behavioral outcomes in a particular context” (Evans et al. 2017, 36). In particular, it prompts the question of how certain platforms facilitate certain user behaviors and thus the production of certain content on the

platforms, most likely due to specific technical and communicative features (Bucher and Helmond 2018, 235). Affordance should therefore also be understood as a relational category in this area of research. While the TikTok platform, for example, offers or prevents specific options for action due to its restriction of media formats to short-form videos (only videos in portrait format with a certain duration can be uploaded), the *actual* modes of use only emerge in the context of active appropriation by users and can therefore be quite heterogeneous (Hopkins 2020, 48; Ilten 2015, 5).

With regard to the presentation of music cultures on certain platforms, it is necessary to consider which musical repertoires can be adequately presented in the context of platform-specific media genres. In order to determine how musicians engage with platform-specific affordances, it is essential to understand which facets of music cultures are more likely to succeed on platforms than others. It is reasonable to posit that as people interact with platforms, certain strategies employed by creative artists will evolve in response to the platforms' functionalities and the opportunities they afford. These strategies may be employed with the intention of enhancing visibility.

3.5.3 Algorithmic Imaginaries

A competition for visibility is taking place among content creators on digital platforms. This phenomenon has recently been described as a “popularity contest” (Bucher 2018, 105), for example, or a “visibility game” (Cotter 2019, 896). Users who engage in the production of content and who wish to differentiate themselves from their peers and achieve visibility must identify strategies for leveraging the algorithmic systems of digital platforms to their advantage. In some instances, this may necessitate adapting their content to align with the logic of the platform, with the goal of reaching as large an audience as possible. It is evident that generating media visibility has been of significant importance to cultural workers for a considerable amount of time prior to the advent of digital platforms. Indeed, mass media have long held a powerful position as communicators and gatekeepers (Bucher 2012, 1165). However, the framework has undergone a significant transformation. Rather than focusing solely on human actors, media content must now also address the algorithmic systems of the platforms (Bucher 2018, 111). Consequently, cultural workers now face the challenge of making their content “algorithmically recognizable” (Gillespie 2017, 65) on these platforms.

In order to implement such optimization processes, individuals must develop a specific understanding of the logic underlying the platforms' algorithmic systems. They then use this understanding to develop specific strategies for action and to tailor their content accordingly (Gillespie 2014, 184). However, the precise functional logics of algorithmic systems remain opaque to individuals not employed by the platform, including successful content creators, as these logics are trade secrets of the platform companies. The resulting strategies are thus inherently conjectural (Bishop 2019, 2591). Hence, it is not only the platform algorithms, which are technical systems, that occupy a powerful position in the competition for visibility; the content creators' ideas about what algorithms *could* do also develop their own agency, which should not be underestimated (Beer 2017, 11). The manner in which individuals interpret the functional logic of algorithms can influence their behavior on platforms in ways that are difficult to predict or preclude in detail by platform companies (Cotter 2019, 896).

Taina Bucher has proposed that human ideas about how algorithms function can be understood as *algorithmic imaginaries*. According to Bucher, such imaginaries about algorithms should be understood as "ways of thinking about what algorithms are, what they should be, how they function, and what these imaginaries in turn make possible" (Bucher 2018, 113). According to Bucher, content creators also need to develop a certain gut feeling for how algorithms work:

The practical engagement with social media platforms as lived-environments implies developing tacit knowledge about the underlying logic of the system. While most technologies are designed in such a way that people do not have to know exactly how it works [...], people tend to construct "mental models" and theories about its workings as a way of navigating and interacting with the world. (Bucher 2018, 114–15)

Although the algorithmic imaginaries of individual users may differ in detail, Bucher's research indicates that content creators can reach comparable conclusions about the functioning of algorithms by specifically observing the popularization processes on individual platforms. This can result in a homogenization of content on platforms if a large number of content creators develops similar ideas about what content can be used to generate visibility in digital spaces and the production logics of different actors are adapted accordingly (Bucher 2018, 105–06). Specific strategies and, as a result, specific aesthetic objects and

communicative practices can emerge on individual platforms over time which are distinctive to the platforms on which they evolved.

3.5.4 Platform Vernaculars

In the mid-2000s, Jean Burgess coined the term *vernacular creativity* (Burgess 2006). This term refers to the phenomenon whereby new communicative practices emerge in response to the influence of new media and then merge with familiar forms of communication in unique ways. For instance, within the specific media environments that platforms such as TikTok, Instagram, and YouTube offer users for the production of (audio-)visual content, certain practices emerge that refer to long-established media formats (photographs and audiovisual media), yet which can only be found in their specific form on the respective platforms. The concept of *platform vernaculars* addresses the development of such platform-specific conventions (Gibbs et al. 2015; Eriksson Krutrok 2021). Gibbs et al. define platform vernaculars as follows:

Platform vernaculars are shared (but not static) conventions and grammars of communication, which emerge from the ongoing interactions between platforms and users. While platform vernaculars are particular to social media platforms, it is also important to acknowledge that they can share many elements, and the vocabulary and grammars of vernaculars migrate between social media platforms as new practices and features from one platform are appropriated for use on others. [...] Platform vernacular draws attention to how particulars [sic!] genres and stylistic conventions emerge *within* social networks and how – through the context and process of reading – registers of meaning and affect are produced. This approach allows us to examine the specificities of social media platforms. (Gibbs et al. 2015, 257–58; italics in original)

These vernaculars are thus created on the basis of interactions between platform users and the affordances of the platforms. Scolere, Pruchniewska, and Duffy demonstrate through interviews with content creators that decisions about which types of content are shared on which platforms depend on both the technical features of the platforms and on specific assumptions made by content creators about the cultural characteristics of different platforms (Scolere, Pruchniewska, and Duffy 2018). While different media platforms, such as TikTok, Instagram, and YouTube, function in a fundamentally comparable manner, they are also distinguished by their unique interfaces, media genres,

and possibilities for action. Furthermore, they are utilized by different user groups with varying intensities. The development of specific platform cultures is influenced by a complex interplay of these heterogeneous factors (Burgess 2021, 25). Consequently, the homogenization of content on certain platforms is highly probable, as successful content creators align themselves with already established platform-specific conventions. Furthermore, due to their high visibility on platforms, they can contribute to the consolidation of such regularities in the creation of content for specific platforms or the expectations of numerous other users.

3.6 Platforms and Cultural Production

It is evident from the paragraphs above that platform-specific modes of expression and conventions of representation can emerge as a result of socio-technical interactions between platforms and users or content creators. For several years, both journalistic and academic discourses have asserted that digital platforms exert a profound influence on the processes of cultural production. In the field of music, this is particularly evident in discussions about how the functional logics of streaming platforms influence the processes of professional music production. First and foremost, there are concerns that the streaming economy will have a significant homogenizing effect on music production. This is based on the assumption that music creators will have to adapt their productions to align with the business models of the platforms. One particularly popular hypothesis is that songs would have to capture listeners' attention immediately, for instance by employing a catchy chorus at the beginning, due to the distribution mechanisms of the streaming platform Spotify, which only remunerates the creator for a stream after a listening duration of thirty seconds. Furthermore, the length of songs would gradually diminish as listeners listened to more songs in less time. Given that each stream is remunerated individually, it is assumed that greater profits could be generated in this way. However, such hypotheses are usually not based on empirical findings. Instead, they are comparatively generalized statements by single authors, often with a clear critical connotation (see Hesmondhalgh 2022 for a critique of these debates).

When viewed through the lens of sociology of technology, the skepticism about the supposed influence of digital platforms on cultural production processes is not surprising. The phenomenon of platformization, and more gen-