

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-

erally digitalization, is relatively recent, yet it has already permeated numerous sectors of society, as previously outlined. The establishment of such fundamental technologies is contingent upon heterogeneous and often protracted processes of social appropriation and adaptation. These processes are accompanied by debates about the potential socio-economic and socio-cultural consequences of these processes of change. While a long-established fundamental technology such as electricity is now so deeply embedded in social practices that it may seem *quasi-natural* to most people, the various information and communication technologies that are crucial to platformization are not yet embedded in everyday lifeworlds in a comparable way (Schrape 2021, 10–11). For these reasons, some of the developments connected to the increasing platformization of society are currently still associated with uncertainty and fear.

However, there are other discussions of the potential influence of digital platforms on the processes of cultural production that lack this critical undercurrent. The focus here is on the extent to which cultural workers must tailor their products to specific platforms in order to comply with the respective logics of popularization, i.e., to generate visibility, clicks, likes, etc. It is argued that the rules and principles that are defined by platform companies and materialize in the platform interfaces and algorithms influence the work of content creators in specific ways. In this context, researchers often speak of *optimizing* aesthetic objects such as songs, images, or texts for specific platform contexts (Morris 2020; Morris, Prey, and Nieborg 2021; Raffa and Pronzato 2021). In the sense used by Morris, Prey, and Nieborg, the term *optimization* does not necessarily imply an increase in artistic quality but refers instead to the fact that, in the context of the platform, cultural creators must differentiate themselves from the vast quantity of content and creators in order to garner attention. In essence, aesthetic objects must be made “more searchable, discoverable, usable, and valuable in both economic and cultural senses” (Morris, Prey, and Nieborg 2021, 162–63). In this respect, it would make sense to consider pictures or songs, for example, as datafied objects to a certain extent. Everyone involved in the production and distribution of these objects (in the music sector, for example, musicians, label employees, producers) would have to some extent become data scientists in order to succeed in the digital competition for visibility in the long term (Morris, Prey, and Nieborg 2021, 163). Although not all of the above concepts for analyzing socio-technical relations in the context of platforms are mentioned in the corresponding writings, it is evident that the fundamental ideas regarding algorithmic cultures and imaginaries as well as platform affordances and vernaculars, are reflected here.

In the context of concrete musical optimization processes, reference is sometimes made to the production of “streaming-friendly music” (Nordgård 2021, 46), which is music that is assumed to be more successful on certain platforms due to its being tailored to specific algorithmic filtering processes. Such theories often refer to music that is distributed on particularly popular Spotify playlists and is designed to make no demands on the listener’s attention, so that it can play more or less unnoticed in the background. This would allow multiple songs to play one after the other and be paid for accordingly (Nordgård 2021, 46). With regard to the theory that songs tend to become shorter due to the distribution logic of Spotify and comparable streaming platforms, Morris (2020) even assumes specific *platform effects* in the field of contemporary music production. This term is a reference to the *phonograph effect* described by Mark Katz (Katz 2010), which Katz attributes to the development of sound recording technologies in the early twentieth century: musicians had to adapt the duration of their recorded music to a maximum possible playing time of approximately three minutes, which was the uppermost limit of what could be stored on one side of the shellac records that were widely used at the time. Furthermore, it can be postulated that the music recorded on sound carriers probably differed in numerous ways from the real sound events experienced at the time. It is evident that the recording methods of the time forced musicians to stand in a group in front of a single recording funnel and attempt to record all their instruments at an appropriate volume. Given that the volume ratios between the instruments were sometimes adjusted in order to enhance the quality of the recording, it is logical to conclude that this would inevitably result in discrepancies in the sound when the same music was performed live. Such observations lead to the conclusion that sound recording and playback technologies have had a significant impact on the sonic design of recorded music for some time.

The platform effects assumed by Morris refer not only to all sonic transformation processes, but also to the platform-specific optimization of musical products in a broader sense. Thus, not only does “sonic optimization” (Morris 2020, 5) play a role, but also “metadata optimization” (Morris, Prey, and Nieborg 2021, 164), which posits that musicians, label managers, and music producers must also consider using specific keywords, such as the names of well-known musicians, in song titles to generate interest and attract the platform algorithms. This assumption also pertains to typical search engine optimization strategies, such as clickbait tactics, which attempt to persuade as many users as possible to click on videos, articles, or images by using sensa-

tional headlines or attention-grabbing keywords (Morris, Prey, and Nieborg 2021, 164).

While these considerations appear to be essentially plausible at first glance, there is not enough solid empirical data to substantiate all of these hypotheses. For instance, Morris' statements, which appear to be a factual report of the strategies of professional musicians operating on platforms, ultimately concede that empirical studies will be necessary in the future to show the extent to which musicians, producers, or label managers actually respond to the supposed optimization constraints (Morris 2020, 8). There exists a problematic tendency among academic publications to uncritically adopt certain theories on music-related optimization which are regularly disseminated in journalistic texts, usually without any empirical basis. This is exemplified by an article by Diana Zulli and David James Zulli on mimetic practices on TikTok. In their article, the authors posit that the production of popular songs is subject to substantial processes of change due to the logics of the TikTok platform, particularly its focus on very short videos of fifteen to sixty seconds. They argue that it is now crucial to produce songs that are suitable for dance challenges. Zulli and Zulli conclude: "Bridges and choruses of popular music are being shortened to fit TikTok's fifteen- to sixty-second video limits. Lyrics and tunes are being designed with corresponding movements with hopes that TikTok users will attach a song to a dance challenge" (Zulli and Zulli 2022, 1884). These assumptions may appear plausible; it is, after all, reasonable to assume that certain platform effects will occur over time, or have already occurred, as creative artists must respond to changing media and economic conditions. However, such theories lack any empirical foundation, which is why the approach of formulating supposedly universally valid facts about platform-related production processes is particularly misleading in this context (see Raffa and Pronzato 2021, 301–02 for a comparable approach). Furthermore, the authors do not specify which forms of popular music they mean. This suggests that popular music cultures in general are affected by the processes of change posited by Zulli and Zulli. However, it seems more probable that this is only relevant in very specific segments of the field of what is generally referred to as mainstream pop.

In exceptional cases, music production professionals engage in research studies to provide empirical evidence to support the hypotheses of potential platform effects. As Morris, Nieborg, and Prey posit:

Cultural producers now make cultural goods explicitly with search engines, platform economics, and discovery algorithms in mind – or at least with the

*perception* of these regimes, models, and frameworks. [...] Given that the display, search, discovery, and consumption of cultural goods now all take place through the same software platforms that distribute cultural content, content needs to be crafted with the mechanics and infrastructure of the platform in mind. (Morris, Prey, and Nieborg 2021, 163; italics in original)

Once more, the impression is given that these statements are based on well-founded knowledge or even an insider's perspective on platform-related production processes. At the same time, the authors point out the difficulty of proving an actual causal connection between certain platform logics (especially those of the streaming platform Spotify) and processes of change in the field of music production. Consequently, interviews were conducted with "musicians and music industry insiders" (Morris, Prey, and Nieborg 2021, 164) and it was found that strategies related to "songs that stream" (Morris, Prey, and Nieborg 2021, 164) are frequently discussed. To substantiate this, a Dutch musician and producer is quoted anonymously:

I know for a fact that in the New Music Friday playlist (on Spotify), a user, I think, listens to a song for about 5 seconds before they skip. So you have to catch their attention in 5 seconds. So whenever I do a session with musicians, I try to make the intro as fast or as interesting as possible. So from the top it should grab your attention. (quoted in Morris, Prey, and Nieborg 2021, 164)

This statement serves to reinforce the authors' hypothesis, although no other music practitioners are referenced in the course of the article, which is disappointing given the reference to several interviews with "musicians and music industry insiders" (Morris, Prey, and Nieborg 2021, 164). This shows that even research that is purportedly based on empirical data is unable to substantiate the hypotheses on potential platform effects.

Such observations are indicative of a significant limitation in the current diagnostic framework for digitization and platformization. While it is evident that platformization has a profound impact on social structures, the concrete effects of platformization on cultural life remain poorly understood due to the ongoing nature of the process. Such diagnoses are frequently based on subjective experiences or observations of highly specific dynamics in narrowly defined fields. Consequently, they often cannot be generalized (Schrape 2021, 49).

There is a growing number of critical voices on the alleged effects of platformization on musical production and reception. These voices are calling for

an empirical basis to support such theories, which are informed by a diagnosis of the times. According to a recurring argument, it is crucial to reconstruct the actual ways in which human actors engage with digital platforms in terms of music production and reception. It is important to recognize that users do not necessarily utilize platforms in the same manner as platform companies may have initially envisioned during the development process (Hesmondhalgh 2022, 15; Jansson 2023, 3209). Consequently, while platform-deterministic approaches should be avoided, researchers must also prioritize investigating specific cultural domains within the platform context (Poell, Nieborg, and Duffy 2022, 19–20). This is necessary in order to substantiate previous theories, which are prone to over-generalization when it comes to the supposed effects of platformization on music creators. In order to do so, it is necessary to present detailed findings on how musicians in specific fields on different platforms are actually influenced by specific platform logics (Poell, Nieborg, and Duffy 2022, 4). In the words of Nieborg and Poell: “The challenge ahead is to develop in-depth case studies of how platformization unfolds in particular geographies, fields, and instances of cultural production” (Nieborg and Poell 2018, 4288).

### 3.7 Empirical Research on Cultural Production on Platforms

What are the primary motivations for cultural workers to become active on specific platforms with specific content? What strategies do they develop to align with the underlying logic of these platforms? And how do such strategies manifest in the aesthetic objects that circulate on different platforms? These are the essential questions that must be addressed in (not only) music-related research on platforms if we wish to generate substantial insights into the socio-technical relationships between cultural workers and platforms.

The processes of cultural and media production have been extensively researched for some time, particularly in the fields of production studies and media industry studies. The analysis of working contexts in specific media industries and the corresponding processes of cultural production can now look back on a history of approximately eighty years (cf. Caldwell 2013; Vonderau 2013; Vonderau 2023). The key question in this field of research is why certain cultural objects emerged in certain historical phases and under certain economic, technological, social, and cultural conditions, subsequently becoming popular, while others remained virtually unknown or did not emerge