

## **You Made This? I Made This: Practices of Authorship and (Mis)Attribution on TikTok**

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In 2019, TikTok captivated international attention as a breakout short-video platform with numerous features that facilitates recreating popular videos with ease. TikTok's platform feature "use this sound" affords the creative reuse of audio clips or songs from videos that users were just watching. TikTok employs an automated system to identify original creators but the system frequently obscures or misattributes the "original" source of the audio. Subsequent creators may then use sounds without any connection to the original author. In response, creators have developed unique platform practices to overcome cultures of misattribution engendered on TikTok. This study employs a mixed-methods approach to investigate novel attributional platform practices relating to authorship and attribution on TikTok. Using a bespoke data scraping tool, quantitative content analysis, and a series of qualitative case studies, this study explores the contradictory logic of authorship and how (mis)attribution is shaping cultural production and platform practices on TikTok.

*Keywords: TikTok, attribution, copyright, platformization, aural memes*

In early 2020, an aspiring creator on the popular short-video platform, TikTok, published a video calling out a verified TikTok creator for re-creating an earlier video of his without giving him credit. In the video, a frustrated creator emphasizes that TikTok includes numerous features to amplify the reach of videos with new audiences and gives creators the ability to "tag" other TikTok users in the text or metadata of videos to provide credit where credit is due. One of the top comments on the callout video read: "Chill dude its [*sic*] just TikTok," to which the original creator replied, "Except this is a platform for exposure for some people who are working really hard to put creative stuff on here." This exchange perfectly encapsulates why TikTok is an exemplary platform to explore the legal and sociotechnical intersection of authorship and practices of (mis)attribution on social media.

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Over the past two years, short-video platforms that feature audiovisual content between 15 and 60 seconds have exploded in popularity around the world. TikTok, formerly known as Musical.ly, rose to prominence as a lip-syncing platform that allowed users to create videos singing over existing popular songs. After its acquisition by Chinese tech giant ByteDance, in 2017, TikTok (Figure 1) cemented its position as a global short-video leader by embedding platform features that enable users to emulate, imitate, replicate, and reuse popular trending videos. TikTok's main platform interface—the "For You Page" (FYP)—displays video content that users can scroll through endlessly from the home screen. Users can easily create new videos based on the video they were just watching with a few taps of their fingers, incorporating the same visual effects, template, and audio. Creators can boost the popularity of their own videos by reusing popular audio clips from other creators in new videos, which the platform facilitates through the "use this sound" feature. Those who create an original sound, either musical or not, can encourage others to use their sound to help it "go viral" using hashtags such as #usethissound.



**Figure 1. TikTok logo.**

Several factors and features on TikTok engender a culture of misattribution. The platform infrastructures (Nieborg & Poell, 2018) of TikTok make it a highly spreadable platform (Jenkins, Ford, & Green, 2013). TikTok encourages spreadability by circumscribing creativity (Kaye, Chen, & Zeng, 2020), or suggesting trending formats and audio to users to create their own videos. Platform affordances (Nagy & Neff, 2015), such as these, have previously been found to play an important role in mediating norms of authorship, ownership, and attribution in digital content spaces (Meese, 2014). Users can freely reuse popular formats, audio clips, or even licensed music without any connection to the original source or fear of penalty. Issues with attribution on spreadable social media platforms have been raised in previous online creative communities (Fiesler & Bruckman, 2014; Perkel, 2016) and among everyday mundane users' practices (Meese & Hagedorn, 2019). Compared with users in creative communities, mundane users are frequently and incidentally involved in copyright infringement as part of their everyday activities (Tan, 2018; Tehranian, 2011). Although previous studies suggest most mundane users are not overly concerned with the particulars of copyright law (Fiesler & Bruckman, 2014; Perkel, 2016), users still cry foul when they see their original content being used without appropriate credit or when being passed off as the work of another.

TikTok features an automatic attribution system for audio content, an automated indication as to the original creator of an audio clip or song in any given video. Automatic attribution has previously been found to be inadequate for creators (Monroy-Hernandez, Hill, Gonzalez-Rivero, & boyd, 2011) and, indeed,

on TikTok there are few safeguards in place to prevent inaccurate automatic attribution from misidentifying or misattributing creators. Creators are, for instance, free to upload videos that misidentify popular audio clips or songs as their own. Other creators reupload viral content that contains misattributed original works to remind audiences that they were the authors or original creators. The shortcomings of TikTok's automatic attribution system stand out in comparison with other popular audiovisual platforms, such as YouTube (Google, 2020) with its sophisticated Content ID system, which makes misattribution difficult and punishes creators who use licensed content or protected content.

This study explores the complex sociotechnical processes that shape (mis)attribution practices on TikTok. We present results from a content analysis of systematically collected short videos to illustrate persistent attributional issues on TikTok. Findings contribute to the growing body of work on complex and interconnected relationships among various subjects on the copyright spectrum (Meese, 2018) and the way platforms mediate and construct social participation (Gillespie, 2017a). The next section details attributional issues on TikTok followed by a review of copyright literature that situates the value of attribution and the complexities of authorship in legal studies. We then present our methodology that involves scraping and analyzing approximately 1,000 TikTok videos, which allows us to develop the discussion themes and concepts presented in the final sections of this article.

### **Who Made This?**

The features allowing creative reuse of viral or memetic content on TikTok are simple, straightforward, and streamlined. As we describe below, TikTok facilitates effortless produsage (Bruns, 2008), as users can create new videos in as few as three taps of their fingers. Amid millions of aspiring creators uploading billions of videos, success for TikTok creators relies on capitalizing on the latest hashtags, trendy memes, and popular audio. When creating videos, audio clips or songs can be recorded alongside video, imported from TikTok's internal audio library (TTAL) of short song clips, or included through the "use this sound" feature that directly imports audio from another TikTok creator's video. In the cases of audio files taken from other TikTok creators, the newly created video will automatically display the previous TikTok creator as the original creator of the audio, regardless of whether the previous creator actually created the audio or not.

This ambiguous environment is rare online in 2020. Advanced automated and manual mechanisms to detect and remove infringing content are commonplace on digital content hosting platforms (Kaye & Gray, 2020). Yet, during the first six months of 2019, TikTok only reported removing 3,345 videos for copyright infringement (TikTok, 2019), while YouTube reported removing over 16 million (Google, 2019) in the same timeframe. Automated copyright enforcement systems, like YouTube's Content ID, have matured significantly over the past decade to the point where potential infringers must go to great lengths to circumvent it (Gray & Suzor, 2020). Claiming the works of others as one's own has become increasingly difficult across a range of digital platforms, such as Instagram, Deviant Art, and Scratch (Meese & Hagedorn, 2019; Monroy-Hernandez et al., 2011; Perkel, 2016). TikTok's user communities—not to mention the platform itself—foster a different culture of practice. The community thrives on the creative reuse of popular video, audio, or meme formats, and the platform promotes copying.

Indeed, as we illustrate below, many popular TikTok trends and videos of the past year are born of misattributed songs or audio. This creates issues for creators who are working hard to produce creative content only to be misattributed, and it has further implications for creators who may be deliberately misattributing others' content to boost their TikTok profiles. In the coming years, attributional concerns will be only exacerbated by TikTok's increasing commercialization.

TikTok creators can go viral using audio created by someone else but attributed to the creator of the TikTok rather than the original artist or creator. Moreover, original creators may discover their misidentified audio has gone viral but must then fight for visibility to assert that they were, in fact, the original creator. But then, what is an original creator on TikTok? This is as much a cultural and philosophical question as it is a legal one. Decades of debate among legal scholars suggest identifying who exactly deserves credit for "original" works is all but straightforward.

### **Attribution and Authorship**

In this section, we draw from legal studies and science and technology studies (STS) to explain why attribution and giving proper credit is a priority for creators on spreadable (Jenkins et al., 2013) digital media platforms like TikTok. We consider the relationship between creators who reuse and transform the creative content of others and why the simple act of manually giving credit can mitigate concerns over misattribution online. We go on to explain the ways in which the TikTok platform enables incidental misattribution through its sociotechnical affordances. We begin by discussing the legal context of attribution.

From a legal standpoint, attribution is a copyright issue. Being properly attributed to one's creative works is a moral right of copyright (e.g., Copyright Act, 1968). As opposed to economic rights of copyright, which govern and protect the monetary value of creative works and the financial interests of rights holders (Fisher, 2017), moral rights guarantee the rights of an artist—or creators, as we will refer to them—in the context of TikTok, to be connected to their work (Hansmann & Santilli, 1997). Moral rights are not recognized equally in all international variations of copyright, such as the U.S., where the notion of moral rights is minimally incorporated (Davis, 2018). Although the right of attribution is a commonly enumerated moral right that ensures artists' names are always connected to works they created and are not associated with works they did not create, they have figured less prominently in the development of globally dominant copyright regimes than economic rights (Fisher, 2017). In their recent inquiry into copyright practices in creative online communities, Pappalardo and Meese (2019) argue that moral rights may play a more important role in a digital era than copyright laws would suggest. Moral rights are less connected to the economic incentives that both encourage creators to continue making creative works and act as another barrier between the general public and copyright protected works (Fisher, 2017; Suzor, 2013).

Although not as quantifiable as economic rights, the intrinsic value of moral rights is not lost on creative artists. According to Towse (2006), "it may be that artistic motivation and the incentive to produce works of art are not just due to financial rewards and economic rights but also to moral rights," (p. 581). However, as we describe below, the moral right of attribution does appear to figure prominently into motivations of TikTok creators. A question to consider here is, who are these creators? Or, more importantly, what are they?

### ***Relational Authorship***

The concept of authorship has evolved alongside copyright systems for centuries (Jaszi, 1991). Woodmansee (1992) notes, "as cultural production becomes more corporate, collective, and collaborative, the law [has invoked] the romantic author more insistently" (p. 292). The term "romantic authorship" arose in the 18th century, when self-styled author geniuses began to more aggressively assert their rights to control the exclusive access to their creative works. However, even among the most original of the author-geniuses, their creative works were still likely the product of collaboration in one form or another with colleagues, publishers, and any other individuals who offered some influence (Pappalardo & Aufderheide, 2020).

To reconcile the inherent interconnected nature of authorship, Craig (2011) calls for a revised conception of authorship that accounts for relational modes of cultural production, such as those involving creative reuse and collaboration. Relational authorship (Craig, 2011; Meese, 2018; Shi & Fitzgerald, 2008) contrasts the romantic view of authorship, suggesting that collaboration is instrumental to creative works. In other words, if a creator has the rights to perform a cover song, he or she is acting as both an author and a user of copyright. If the artist does not have the rights to cover the song but does so anyway, the artist is a pirate. These roles are determined based on the position of observers and are unfixed and fungible. Meese (2018) argues that relationality is "inherent in authorship," but formalizing it through copyright leads to "significant inequities" and "reveals a number of problems when the opaque nature of the creative process intersects with subjectivity" (p. 69).

To account for the subjectivity and inherent relationality of the creative process, Meese (2018) advances a triadic framework that considers the relationships among the three main subjects of copyright—authors, users, and pirates—to expose "the various ways that subjectivity manifests in copyright" (Meese, 2018, p. 8). Meese's subjective relational triad provides a framework to examine "how these three subjects were formed and how they have subsequently been redefined in response to a range of technology innovations and cultural discourses" (p. 16). Videos posted by TikTok creators can be placed under a different category in Meese's (2018) subjective relational triad each time they are generated because the platform features both affording and constraining practices of giving credit.

### ***Credit Where Credit Is Due***

Giving credit when using others' works online is just one way to redress the quotidian unintentional instances of copyright infringement that occurs in everyday modern life. Tehranian (2011) posits that copyright infringement is so common that an average American citizen could, theoretically, be liable for over 4 billion dollars in copyright damages in the course of one day of mundane activities. Tan (2018) extends Tehranian's (2011) thought experiment to the realm of social media and finds similarly omnipresent copyright infringement:

Despite the ubiquity of the use of social media platforms, there is a dearth of rigorous consideration given to how specific social media platforms affect the role laws, including copyright laws, play in securing compliance from their users. Moreover, social media

platforms have their unique characteristics and business models that deserve separate analyses. (Tan, 2018, p. 199)

Such separate analysis was conducted by Monroy-Hernandez and colleagues (2011) who studied the (in)efficacy of automatic attribution systems among users of the online creative space Scratch. Scratch allows users to create and share video games, animations, interactive art, and simulations. Scratch was “conceived, designed and launched as a platform for remixing” (p. 3424); however, users frequently complained about plagiarism or lack of proper acknowledgement. The study found that some Scratch authors still intervened when a system was implemented to automatically attribute the original author of a remixed work on Scratch. Through a quantitative study of Scratch metadata and a qualitative study interviewing creators, the authors found that creators viewed automatic attribution to be insufficient. Even though Scratch is a noncommercial platform designed for remixing, users unilaterally preferred subsequent creative users to give original creators credit manually. “A system can *attribute* the work of a user but credit, which is seen as much more important by users . . . cannot be done automatically,” (Monroy-Hernandez et al., 2011, p. 3429).

The simple act of giving credit has been found to redress concerns of creators who feel their creative works have been infringed in noncommercial platform contexts. Meese and Hagedorn (2019) examined norms and practices relating to copyright, attribution, and circulation through in-depth interviews with 16 Australian social media users. Interviewees expressed a range of views on proper attribution and credit online that varied between platforms and online communities. Focusing on mundane, or everyday content, participants agreed that credit was a normative best practice online, particularly when mundane content suddenly became commercially viable, such as by accidentally going viral. Manual crediting as a “best practice” approach to attribution on TikTok, can only materialize through a complex sociotechnical process, evolving available platform features.

### ***(Mis)Attribution as a Complex Sociotechnical Process***

To investigate practices of (mis)attribution on TikTok, we have to consider the complex sociotechnical processes that afford and constrain users’ abilities to give credit where credit is due. The concept of sociotechnical recognizes the ways in which social tasks shape and are shaped by technology (Leonardi, 2012). As such, sociotechnical exchange is constituted in practice and considered a process because “technologies continue to evolve, are tinkered with . . . modified, improved, damaged, rebuilt, etc.” (Orlikowski, 2000, p. 12). Thus, seemingly stable and benign technologies, such as TikTok’s platform architecture and features, are, in fact, constantly changing as its “interfaces, algorithms, terms and conditions, developer resources, and business model” converge with user practices (Duffy, Poell, & Nieborg, 2019, p. 2). Furthermore, TikTok’s platform architecture both affords and constrains users’ practices of giving credit, namely through the automatic attribution feature, and embeds multisided markets and regulatory structures. Thus, (mis)attribution on TikTok is considered a complex sociotechnical process, as the practice of giving credit materializes through a dynamic relationship between user and platform.

By recognizing (mis)attribution on TikTok as a complex sociotechnical process, the current project engages with existing media and cultural studies research that problematizes how social media platforms

shape user practices. Gillespie (2010) argues that emergent social media platforms strategically position themselves as neutral to users, stakeholders, clients, advertisers, and policymakers by carefully claiming and creating “what they do and do not do” (p. 347). All the while, the technical, economic, and political design of the platform actively intervenes and shapes social and relational practices, whether or not immediately apparent to stakeholders (Gillespie, 2017a). For Nieborg and Poell (2018), this exchange is evident in their theorization of the platformization of cultural production that revisits how commodities—like TikTok videos and audio—are produced, negotiated and characterized by platforms according to influences of infrastructures, markets, and governance. In turn, as evidenced by Bishop’s (2019) research on managing visibility on YouTube, users are impelled to develop practices that align with the business models of platforms (Nieborg & Poell, 2018). On TikTok, as on YouTube, visibility is central. Appearing on the FYP is the means to going viral and attaining a wider audience and following. As such, we scrutinize what is or is not permitted by the platform when constructing (mis)attributions on TikTok.

Our main theoretical contribution with this article is to expand on Duffy, Poell, and Nieborg’s (2019) recent call for further research into platform practices, or how “strategies, routines, experiences and expressions of creativity, labor, and citizenship” (p. 2) are shaping cultural production on platforms. Platform practices have been previously studied on TikTok and its Chinese counterpart, Douyin (Kaye et al., 2020), but not in the context of copyright and (mis)attribution. Therefore, the main question this study will answer is about what platform practices shape (mis)attribution on TikTok. In the next section, we present a review of the novel systematic approach employed to investigate these practices on TikTok.

### Methodology

This exploratory study employed a mixed-methodological approach to answer the main research question. We collected a sample of 999 TikTok videos using a bespoke data scraping tool, analyzed the collected data using a specifically developed codebook, and then identified a subsample of case study videos for qualitative analysis. The TikTok scraping tool, developed in Python, collected TikTok videos and associated metadata (see Table 1). To establish the correct song title and artist name for the sound used in the videos, we used a music fingerprinting service provided by ACRCLOUD. To minimize potential algorithmic bias, data were collected using TikTok’s Web platform without signing into a personal TikTok account.

**Table 1. Scraped Metadata.**

Video Metadata	Audio Metadata	Social Metadata
Video ID	Audio name	Comment count
Video Text	Audio account name	Share count
Creation Date	Original sound (y/n)	View count
Account Name	Audio Title (ACRCLOUD)	
	Audio Artist (ACR Cloud)	
	Spotify URL (ACR Cloud)	

Data for this study were collected in January 2020. We collected a sample of videos ( $N = 999$ ) for manual coding by scraping #fyp, or For You Page, TikTok’s default content viewing page. According to TikTok’s internal metadata, #fyp has been used to tag more than 2.5 trillion posts at the time of this writing

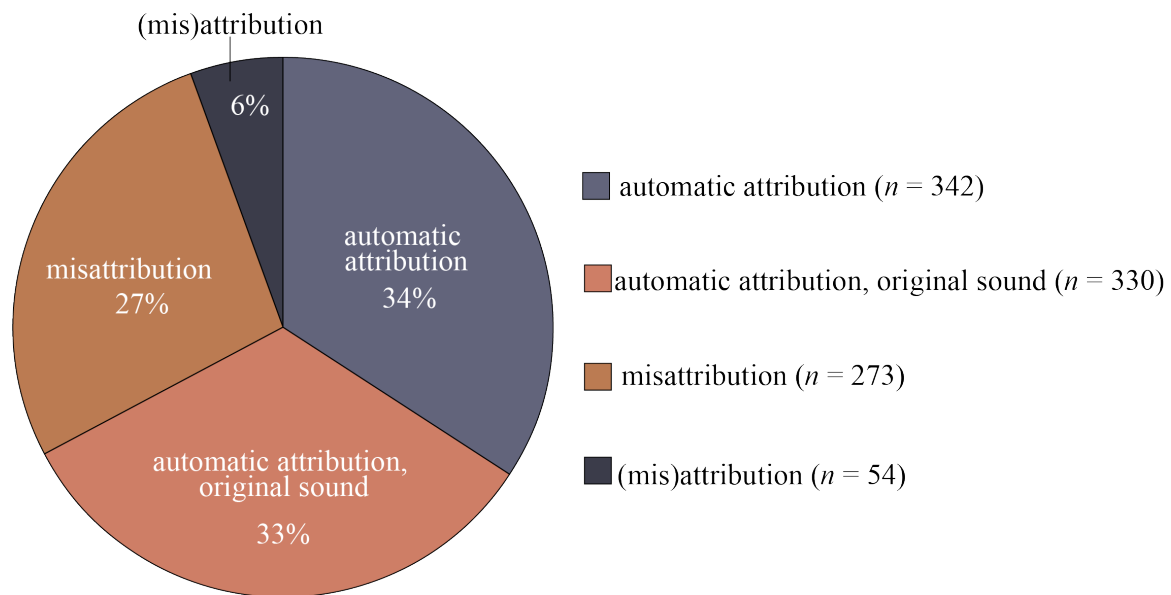
(TikTok, 2020). After scraping our video sample, we developed a coding system based on our research question and initial observations. The coding system used a custom coding interface that displayed video and audio, associated metadata, and allowed coders to input coding commands based on our codebook. The codebook contained four prompts. The first coding prompt delineated videos by category of whether attribution was required (Cat 1); the second prompt asked coders to determine whether misattribution occurred in the video (Cat 2); the third prompt asked coders to indicate what, if any, attribution was present in the video beyond the automatic attribution (Hashtags; Video Text; Verbal; On Screen Text); and the fourth prompt designated the video as a candidate for case study (CS). We conducted a pilot test using a random sample of thirty ( $n = 30$ ) videos. We calculated intercoder reliability between the three coders with Krippendorff's  $\alpha$  and determined a satisfactory level of agreement ( $\alpha = .85$ ). Minor refinements were made to the coding interface following pilot testing and then the same three researchers coded the full sample.

After coding the full sample, we identified a subset of videos for in-depth case study analysis ( $n = 35$ ). Case study videos were selected because of unique or unusual features that illustrated novel practices of (mis)attribution on TikTok. We then each coded the full subset of case study videos using a coding questionnaire to identify discussion themes. Using TikTok's "use this sound" feature, we operationalized the platform affordances to follow the digital traces (Venturini & Latour, 2009) of the audio, attempting to locate the author within the platform. This entailed navigating multiple platform interfaces, user profiles, and videos that allowed us to intimately observe platform practices of (mis)attribution. When we were unable to locate the audio within TikTok's ecosystems, we extended the search and used a search engine and query techniques based on the clues within the audio itself, such as any lyrics. This search strategy led us to other platforms such as Spotify, SoundCloud, and YouTube, which demonstrates that audio on TikTok exists within a broader media ecology. Trying to source authorship of misattributed audio clips among our case study sample helped to further illuminate the complex sociotechnical processes that TikTok's platform architecture generates.

## Results

Our mixed-method approach produced both quantitative and qualitative results. Beginning with quantitative results, of the full sample of videos collected ( $N = 999$ ), coding revealed two categories of proper attribution and two categories of misattribution (Figure 2). First, 34% ( $n = 342$ ) were properly attributed by the automatic attribution system crediting the original author of the audio, who was not the creator of the video. Another 33% ( $n = 330$ ) were properly attributed by the automatic attribution system, crediting the author of the "original sound," who was also the creator of the video. Further, we found 27% ( $n = 273$ ) of the sample to be misattributed, meaning the automatic attribution credited a TikTok creator who was not the original creator or author of the audio. Finally, 6% ( $n = 54$ ) were misattributed by the automatic attribution system, crediting a creator who was not the original author of the audio but in which the creator of the focal video had used the platform features (such as video text and hashtags) to manually give credit to the original author of the audio.





**Figure 2. (Mis)attribution coded (N = 999).**

Thus, for approximately one-third of videos collected, misattribution was not a concern as the audio was authored by the creator of the video. For the roughly two-thirds of videos remaining, the audio in the video was authored by someone other than the creator of the video, and in about half of these, TikTok's automatic attribution system worked as intended. As such, one-third of the videos collected demonstrate how misattribution can occur on TikTok. Following on from these results, the qualitative themes we advance in the next sections further explore the platform practices we identified through an in-depth case study of 35 videos.

### Attributional Platform Practices

Case studies highlighted creators' practices of proper attribution and misattribution on TikTok. We found two ways in which audio content was attributed properly. First, as noted above, roughly one-third of our sample were instances in which TikTok's automatic attribution system correctly identified the original creators of audio clips or songs. Second, some creators manually gave credit when the automatic attribution mistakenly identified them as the original creator. Credit was given to other TikTok creators or original musical artists through on-screen text, hashtags, or other associated metadata. Although only a small subset of our sample (6%) engaged in these platform practices, they constitute an important intervention to overcome issues with attribution as we argue below.

Our conceptualization of attributional platform practices draws on the work of Monroy-Hernandez and colleagues (2011), who describe a "moral" (p. 3428) remix as a practice that includes some effort at manual crediting in addition to automated attribution. These efforts, which are now also termed platform practices (Duffy et al., 2019) describe any occasion in which a user tries to ensure an original creator is properly attributed to their work, without relying on automated attribution systems. Attributional platform practices exist on a broader continuum of illicit and permissible sampling (Behr, Negus, & Street, 2017). They may mean using a single on-

screen reference to an artist or creator whose work is featured in a subsequent TikTok video. They may also involve a combination of practices such as hashtagging, manually renaming audio clips, or verbal mentions during the video. We use this conception of attributional platform practices to unpack tensions among manually giving credit, automated attribution systems, and varied creative attribution practices.

In some cases, creators develop their own practices to manually give credit to the original without diminishing their own creativity or transformational use of others' original works. An example of a creator manually superseding TikTok's auto attribution system is @smalltownhollywood in a video that manually gives credit to an original musical artist while performing an original cover. The video shows the vocalist singing a parody cover of Lizzo's popular "Boys," affectionately titled "Girls." The creator, @smalltownhollywood, clearly indicates in the description that he "Made a version for the girls"—identifying his original sound as one that builds on another's creativity.<sup>1</sup> The audio is labelled "original sound—smalltownhollywood" by the automatic attribution system but the creator acknowledges the original artist and song title by adding #lizzo and #boys to the description of his video, identifying the original work he is building on and making it findable by others. The attributional platform practices of adding hashtags and other metadata to identify reused audio benefits the original artists as well as the TikTok creators building on their work.

To improve issues and errors with the automatic attribution system, TikTok recently introduced a sound-matching system to identify songs uploaded to the platform by creators incorrectly listed as original audio. Still, it is questionable whether the current sound-matching tool is an improvement, or whether it only complicates appropriate crediting and attribution of creative content. TikTok's sound-matching system can seemingly identify individual clips of popular songs. However, in many cases of misattribution on TikTok, sound matching would be just as ineffective or inapplicable as the automatic attribution system. For example, a sound-matching system would have difficulty identifying more complex audio clips, such as two mashed-up songs, individual creator voices, or audio clips drawing on other sources of popular media, like TV shows or films. What happens with unpublished remixes or Soundcloud music that are not indexed by the sound-matching database? On TikTok, these and other produsage practices (Bruns, 2008) are central to the core function and appeal of the platform. Yet the issues that can arise from these everyday practices further highlight the importance of complementary attributional platform practices.

In a digital environment that thrives on spreadability (Jenkins et al., 2013) and where attributional issues are platform-facilitated and user-perpetuated cultural norms (Meese & Hagedorn, 2019), creators' ability to assert authorship of their original works is limited. TikTok's laissez-faire approach to attribution creates economic value for the platform but may do little to motivate creators, if they feel their creative labor is going unnoticed. Yet, the additional effort required from other creators, to acknowledge original authorship through (mis)attribution practices, can build "emotional value" (Monroy-Hernandez et al., 2011, p. 3428) that contributes to community building and incentivizes creativity. Through these relational aspects, (mis)attribution practices on TikTok can be understood as a platform-specific, best-practice model of giving credit, which is more acceptable to the creative community.

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<sup>1</sup> SmallTownHollywood TikTok Video

<https://www.tiktok.com/@smalltownhollywood/video/6698150919017598213>

Our case study revealed that further attributional platform practices extend well beyond manually giving credit; they may also include a range of activities to alter content, circumvent the TTAL, boost visibility, or maintain connection when original audio clips become viral aural memes. The case study and attributional platform practices that we have identified are introduced in the sections below.

### ***Alteration***

We found several examples of audio that were difficult to attribute properly because they were in some way altered or mixed and mashed together with other sounds. Alteration is a popular strategy for uploading copyright-protected material on platforms such as YouTube, with sophisticated detection systems like ContentID. ContentID scans audio clips uploaded to YouTube and matches it against databases of licensed content to detect and flag any unlicensed content uploaded to YouTube (Urban, Karaganis, & Schofield, 2017). To avoid being detected by these systems, YouTube creators may alter audio by changing the pitch, raising or lowering the tempo, or adding aural effect to distort or mask the original sound (Kaye & Gray, 2020). In coding our full sample, we encountered several instances of audio that fooled our matching program, ACRCloud, often because of some form of content alteration. It is unclear whether creators employ these strategies to fool TikTok's relatively recently introduced sound matching system or whether audio clips were altered for creative purposes, such as shifting the pitch up for comedic effect or slowing a song down to match the pace of a video clip. One example of such alteration in our case study sample is a video of a creator doing a backflip on a swing set while "Diamonds" by Rihanna plays in the background. The audio clip is slightly slowed to match the pace of the video, and the song is distorted for emphasis at the moment of the flip. TikTok's automatic attribution system misidentified the song, and our sound-matching tool was also unable to fingerprint the altered song.

Another form of altering audio on TikTok is by mashing up two or more audio clips to create something new. Mashups also fit on the continuum of sampling mentioned above (Behr et al., 2017), constituting, in part, what Sinnreich (2010) terms a configurable culture. Mashups represent a unique attributional challenge on TikTok because, at the time of this writing, TikTok only attributes one audio source per video. In other words, if a creator mashes up two songs that are both in the TikTok library, only one will be attributed by the automatic attribution system at the bottom of the video. If a creator mashes up two songs outside of TikTok and then uploads the new audio clip into a short video, that creator will be credited as the original creator. Examples of mashup content on TikTok include more traditional musical remixes but also memetic mashups wherein snippets of audio clips are intercut with other songs or popular audio from songs, film and TV, YouTube clips, or other TikTok videos, which we discuss below.

### ***Circumvention***

We identified several creators circumventing the TTAL by recording and editing videos outside of the platform, using cover songs, or using songs from audio aggregator profiles on TikTok. There are several reasons why creators might want to circumvent the TTAL. Perhaps the song the user had in mind is not included in the library or perhaps the 15 or 60 second section of the song included in the library is not the section the user wanted to use. There are also audio clips that could not feasibly be found in the audio library, such as audio clips from TV shows. Or perhaps the user wants to include a song or recording of their own. The (mis)attributional implications of circumvention stem from the fact that any audio uploaded by a creator will be listed as an original

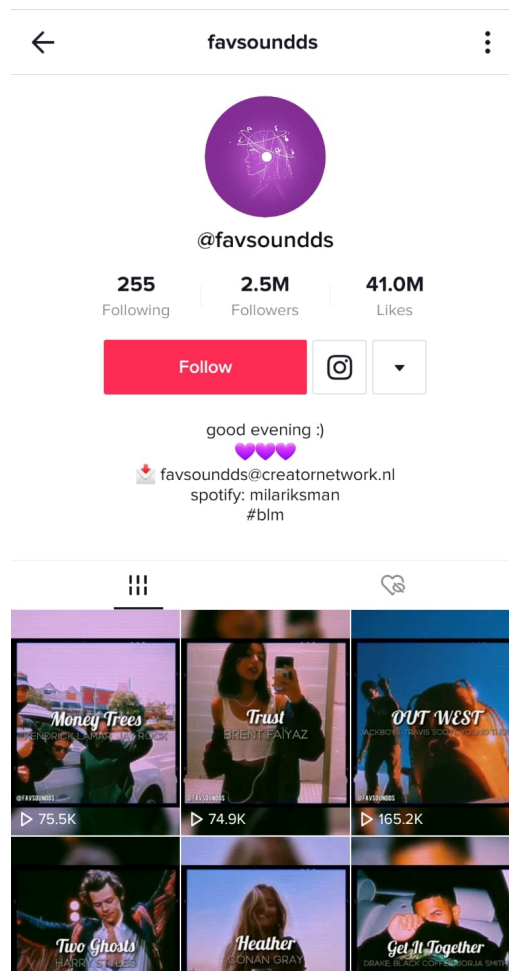
sound unless it can be matched by the TikTok sound-matching system, if the user makes no effort to manually rename the audio.

One means of circumventing the TTAL is by recording a video and editing it outside of TikTok using a third-party video-editing program. Creators can easily add songs or other audio to video clips via external video editing software, which can then be exported and uploaded to TikTok. The obvious downside of this method is the extra time required to edit video and reupload it into TikTok. Creators can also partially circumvent the TTAL with cover songs, both officially licensed covers or covers they created themselves, as in the example of @smalltownhollywood above.

Creators can also circumvent the TTAL via audio aggregator profiles. We encountered numerous creator profiles that featured clips of songs against a static background, ostensibly for being used in videos by other users. In the above example of a creator backflipping to an altered cut of "Diamonds," the audio in question was not attributed to the creator or to Rihanna but rather a user profile named Rapid Sounds that uploads hundreds of songs not available in the TTAL. Audio aggregators on TikTok perform the same function as digital music aggregators, intermediaries in music recording industries that help independent artists distribute their music to digital music services like Spotify or Apple Music (Kaye, 2016). In the course of our data analysis, we identified at least six distinct aggregator profiles that each posted hundreds of videos aggregating songs (Figure 3).<sup>2</sup> The static background of these videos prominently displays the name of the song and artist to attribute sounds to their actual original creators. However, as expected, TikTok's internal automatic attribution credits the songs to these aggregators rather than the creators of the music they are aggregating. At the time of this writing, TikTok creators are limited in their ability to monetize TikTok (Kaye et al., 2020). If they are unable to profit from uploading these alternative libraries, these content aggregators are at least able to increase their visibility on the platform.

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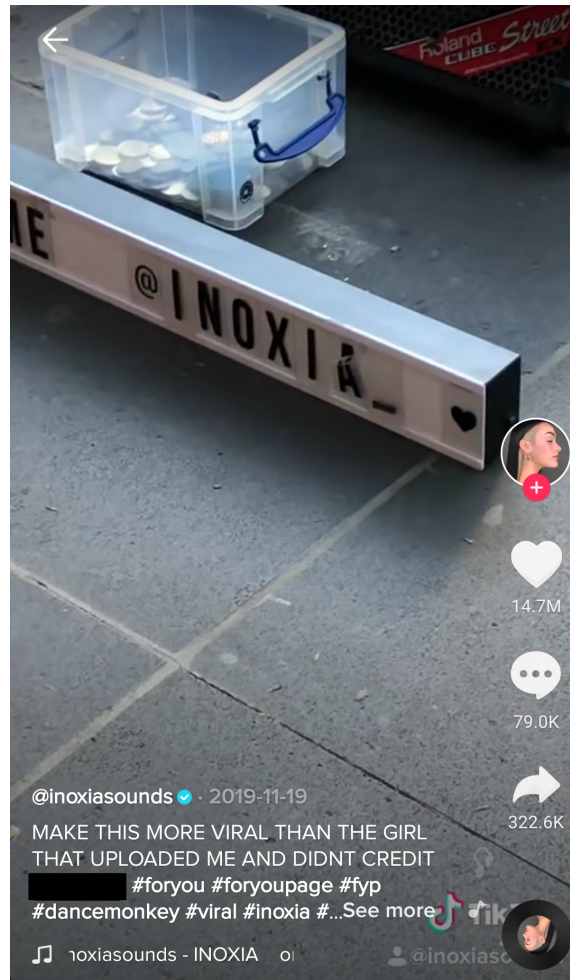
<sup>2</sup> An example of a TikTok music aggregator, Favsoundds <https://www.tiktok.com/@favsoundds>



**Figure 3. Screenshot of TikTok account @favsoundds.**

In the video, Fraser is shown doing a cover of “Dance Monkey,” by Tones and I. The accompanying text of the video reads, “MAKE THIS MORE VIRAL THAN THE GIRL THAT UPLOADED ME AND DIDNT CREDIT” and tags the TikTok creator whose video of that very same street performance went viral (Figure 4). Because of TikTok’s automatic attribution feature, the anonymous TikTok user who recorded and uploaded the video of Fraser busking unintentionally caused misattribution, as the automatic attribution feature defaulted to crediting the author of the video rather than Fraser who, in this context, was the author of the sound. This is because the source of the audio originated from the anonymous user who was recording Fraser. As such, the platform’s automatic attribution system worked as intended. Thus, if attribution was to be given to Fraser by the anonymous user in this instance, it would require additional manual crediting. Although the creator did not manually credit Fraser, they did attribute the name of the song being covered, “Dance Monkey.” In her reupload, Fraser gave additional credit to Tones and I by nesting her video within the hashtag #dancemonkey, in addition to others such as #viral and #singer—making the video more

discoverable on the platform. This example evidences a creator's creative labor and effort to increase visibility and reclaim rightful authorship from another creator. Her efforts proved successful as, at the time of collection, Fraser's reuploaded video had over 100M views.



**Figure 4. Screenshot of reuploaded TikTok video by @inoxiasounds.**

### **Visibility**

We found three particular (mis)attribution practices that demonstrated an intent to boost visibility on the platform: reuploading, appropriating, and renaming. These practices underscore a tension between the goal of going viral on TikTok's FYP and providing credit when due using the platform affordances. In terms of reuploading, we observed that creators reupload popular videos as a means to boost visibility on the platform and sometimes, to reassert authorship of their sound. An exemplary instance of reuploading

to assert authorship from our case study sample came from a video of a street performance by the artist and TikTok creator Sophie Fraser, known by her artist name @Inoxiasounds on TikTok.<sup>3</sup>

Another practice we observed involved creators appropriating trending TikTok audio to gain visibility on the platform. This practice entailed creators selecting a popular audio clip or song featured in millions of other TikTok videos and muting the audio in their video to layer their own audio over the top. In this practice, creators render themselves more "algorithmically recognizable" by employing platform features in such a way that they orient themselves toward the algorithmic systems (Gillespie, 2017b, p. 64). These are similar to visibility practices on YouTube (Bishop, 2019), demonstrating that some TikTok creators are fixated on having their content deemed relevant to reach new audiences via the FYP.

We also found some creators to manually rename the automatic attribution metadata as a means for their audio to be more visible. In these instances, we observed that creators had uploaded an original sound using alteration and circumvention practices and subsequently modified the text generated by the automatic attribution feature to no longer attribute themselves. This practice was observed as an attributional platform practice employed to provide proper attribution to original creators by renaming the text to credit the song title, artist, or both. In some cases, renamed audio even notes where the artist could be found outside of TikTok, for example a song being renamed "Check \_\_\_\_ out on Soundcloud." We also found this practice used as a means to describe the intended use of the audio. For example renamed automatic attribution text that read: "rich boy check" on a video that played Luigi Coccherini's "Minuet" visually juxtaposed with class aesthetics; "fin noggin dude" on a video where the creator lip syncs to an audio clip from the movie *Finding Nemo*; and, "my friend was born without a tongue check" on a video where a person was shown as having no tongue. As such, we observed renaming audio as a practice that not only describes the content of the video associated with the audio, but also serves as a means to make the audio more discoverable on TikTok. Moreover, each of these renamed audio clips had a high video count on the platform, meaning they were a highly spreadable media via the "use this sound" feature. On viewing other videos that, respectively, employed these renamed audio clips, we observed that content of the video was also being imitated by other creators. In essence, these audio clips had become memes.

### **Aural Memes**

Through the above research investigation, we also observed the significance of sounds acting as anchors on TikTok in terms of orientating creators to participate in memetics. The entire platform is organized and shaped by the spreadability of sounds. Specifically, the "use this sound" feature allows creators to create their own video content using the same audio present in the one they were just watching or other popular videos. Through the "use this sound" feature, TikTok creators engage in a practice of memetics. Shifman (2013) explains that memes are units of imitation and digital memes are cultural items that imitate specific content, replicate a particular form, and convey a stance toward this imitation.

TikTok dance challenges are exemplary memetic practices because the same sound and dance style (content) is replicated by different users in similar but fundamentally unique ways (form), and the imitation

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<sup>3</sup> @inoxiasounds TikTok video <https://www.tiktok.com/@inoxiasounds/video/6760948081396681989>

can take a different approach in terms of seriousness or lack thereof (stance). While TikTok dance challenges are explicitly memetic, arguably any TikTok video that has operationalized the “use this sound” feature is a form of an audio meme template (Abidin, 2020) or an aural meme. Whether the sound is a popular song or another creator’s voice, the “use this sound” feature affords wider imitation and anchors the auditory aspects of the video within a particular community of practice on TikTok.

The “use this sound” feature allows aural memes to spread with ease and be discoverable on TikTok. As such, attribution hinges on the “use this sound” feature encoding the correct attribution information for that audio. But when TikTok creators produce a new variation of an audio clip, whether through alteration or circumvention, “use this sound” becomes yet another platform feature that contributes to misattribution on TikTok.

### **Conclusion: Overcoming (Mis)Attribution on TikTok**

This study makes two contributions to the literature on platform studies and copyright. First, we present novel findings from an understudied short-video platform, TikTok, and platform practices about attribution. Second, we offer a unique interdisciplinary approach to platformed attribution drawing from legal studies and STS. We advance the concept of attributional platform practices, which we illustrate through three examples on TikTok. TikTok is a highly spreadable platform (Jenkins et al., 2013) on which virality is a currency and proper attribution is key. Some creators manually attributed content by including the name of the original artist or creator via on-screen text, metadata, or even by changing the name of the automatic attribution metadata audio from “original sound” to attribute original creators. By altering their audio, creators may accidentally or purposely create attributional issues through circumvention of the TTAL. In combination with a flawed automatic attribution system, misattributed creators are left having to fight for visibility and to reassert original authorship.

Findings from our case study echo frustrations with automatic attribution systems reported nearly a decade ago (Monroy-Hernandez et al., 2011), which have manifested in new ways. The presence of an automatic attribution system on TikTok mediates trust between users and creators (Butcher & Helmond, 2017); yet, nearly one-third ( $N = 273$ ) of the videos in our sample were misattributed by the TikTok automatic attribution system. As a result, average TikTok users may easily be misled, accidentally or intentionally, by a system designed to promote proper attribution. Aside from the above-mentioned (mis)attribution practices, our observations around the anchoring function of sounds as pivotal to the organization and the production of aural meme templates (Abidin, 2020) on TikTok underscores the tensions between encouraging creativity by facilitating reuse on the one hand, and acknowledging creative labor on the other.

Earlier in this study we position attribution as a copyright issue, specifically addressing the moral rights of creators. TikTok does have a content identification system, ostensibly more lax compared with other digital platforms like YouTube; however, we observe certain new or emergent practices suggesting creators employ similar automated copyright and IP enforcement circumvention strategies by altering pitch, tempo, and adding audio effects. That said, as in previous studies (Fiesler, Feuston, & Bruckman, 2015; Perkel, 2016), copyright was not evidently held as the central issue for creators on TikTok. Rather than seeking formal legal remedy, we also found creators incorporating additional practices to maintain



connections to their individual content or to give credit to creators who were misattributed. Some creators even attributed songs by including the name or artist information in videos and associated metadata. Others achieved this by renaming their songs or audio clips to give their video proper attribution to themselves, or reuploading their own misattributed content to increase visibility.

This study raises important questions about authorship and ownership of viral meme content. We situate our findings among longstanding debates on law, technology, and creative practice that question “how legal and bureaucratic institutions regulate new technological innovations and their creative uses,” (McLeod & DiCola, 2011, p. 15). The purpose of this study is not to call the copyright police on creators reusing, mixing, mashing, and sampling content on TikTok (Craig, 2011; Meese 2018). On the contrary, we highlight the unique creative flourishing that can take place in a digital environment unencumbered by the same regulatory restrictions that ContentID systems pose on YouTube. As we illustrate, these already messy sociotechnical practices are further complicated by platform architectures that, on TikTok, make giving proper attribution difficult, even for well-intentioned creators.

Our findings emphasize that the act of giving credit is an important platform practice, particularly on highly spreadable short video platforms like TikTok. Though the idea of manually giving credit on digital platforms or social media is nothing new (e.g., Meese & Hagedorn, 2019; Monroy-Hernandez et al., 2011; Perkel, 2016), TikTok creators must actively shift their creative practices to overcome various attributional issues on the platform. Future research into attributional platform practices is warranted on short video platforms as well as on other existing and emergent creative digital media platforms. Further, as TikTok opens new avenues for creator professionalization, these credit and attribution issues will likely lead to licensing and royalty issues. The vast array of sampled and mashup content that serves as the bedrock of the rich and configurable culture (Sinnreich, 2010) of TikTok may become yet another battleground for copyright disputes as has been observed previously in music recording industries (Behr et al., 2017).

Attribution matters on TikTok. Our study underscores previous findings that attribution is more instrumental in complex and messy platform economies than dominant copyright scholarship suggests (Pappalardo & Meese, 2019). As TikTok and other short video platforms become more established in copyright and creative industries, it will be increasingly important for future researchers to pay close attention to the role of attribution in these “emergent (and often highly nuanced)” (Meese & Hagedorn, 2019, p. 7) platform practices (Duffy et al., 2019). After all, as we note in the introduction, it’s not just TikTok. Creators are working hard on short video content only to have it misattributed to someone else, leaving others to wonder, “who actually made this?”

## References

- Abidin, C. (2020). *#WAsian (White-Asian) on TikTok and activism through entertainment*. Retrieved from <https://wishcrys.com/icattdy/>

- Behr, A., Negus, K., & Street, J. (2017). The sampling continuum: Musical aesthetics and ethics in the age of digital production. *Journal for Cultural Research*, 21(3), 223–240.  
<https://doi.org/10.1080/14797585.2017.1338277>
- Bishop, S. (2019). Managing visibility on YouTube through algorithmic gossip. *New Media & Society*, 21(11–12), 2589–2606. <https://doi.org/10.1177/1461444819854731>
- Bruns, A. (2008). *Blogs, Wikipedia, second life, and beyond: From production to produsage*. New York, NY: Peter Lang.
- Butcher, T., & Helmond, A. (2017). The affordances of social media platforms. In J. Burgess, A. Marwick, & T. Poell (Eds.), *The SAGE handbook of social media* (pp. 223–253). Thousand Oaks, CA: SAGE Publications.
- Copyright Act 1968, Pub. L. No. 63 (2019). Australia. <https://www.legislation.gov.au/Details/C2019C00042>
- Craig, C. (2011). *Copyright, communication, and culture: Towards a relational theory of copyright law*. Cheltenham, UK: Edward Elgar.
- Davis, B. E. (2018). Moral rights for musical compositions in the United States: It's not just fair, it's an obligation. *Hastings Communications and Entertainment Law Journal*, 40(1), 69–99.
- Duffy, B. E., Poell, T., & Nieborg, D. B. (2019). Platform practices in the cultural industries: Creativity, labor, and citizenship. *Social Media + Society*, 5(4). <https://doi.org/10.1177/2056305119879672>
- Fiesler, C., & Bruckman, A. (2014). Remixers' understandings of fair use online. *Proceedings of the ACM Conference on Computer Supported Cooperative Work, CSCW*, 1023–1032.  
<https://doi.org/10.1145/2531602.2531695>
- Fiesler, C., Feuston, J. L., & Bruckman, A. S. (2015). Understanding copyright law in online creative communities. *CSCW 2015—Proceedings of the 2018 ACM International Conference on Computer Supported Cooperative Work & Social Computing*, (pp. 116–129). Vancouver, Canada.  
<https://doi.org/10.1145/2675133.2675234>
- Fisher, W. W. (2017). *CopyrightX*. Retrieved from [copyx.org](http://copyx.org)
- Gillespie, T. (2010). The politics of "platforms." *New Media & Society*, 12(3), 347–364.
- Gillespie, T. (2017a). Governance of and by platforms. In *SAGE handbook of social media* (pp. 254–278). Thousand Oaks, CA: SAGE Publications.
- Gillespie, T. (2017b). Algorithmically recognizable: Santorum's Google problem, and Google's Santorum problem. *Information, Communication & Society*, 20(1), 63–80.

- Google. (2019). *Content delisting due to copyright*. Retrieved from <https://transparencyreport.google.com/copyright/overview?hl=en>
- Google. (2020). *How contentID works*. Retrieved from <https://support.google.com/youtube/answer/2797370?hl=en>
- Gray, J. E., & Suzor, N. P. (2020). Playing with machines: Using machine learning to understand automated copyright enforcement at scale. *Big Data & Society*, 1–13. <https://doi.org/10.1177/2053951720919963>
- Hansmann, H., & Santilli, M. (1997). Authors' and artists' moral rights: A comparative legal and economic analysis. *The Journal of Legal Studies*, 26(1), 95–143. <https://doi.org/10.1086/467990>
- Jaszi, P. (1991). Toward a theory of copyright: The metamorphoses of "authorship." *Duke Law Journal*, 1991(2), 455–502. <https://doi.org/10.2307/1372734>
- Jenkins, H., Ford, S., & Green, J. (2013). *Spreadable media culture*. New York: New York University Press.
- Kaye, D. B. V. (2016). *Same song, new dance: Analyzing market structure and competition in the digital music aggregation industry*. Kansas State University. Retrieved from <https://krex.k-state.edu/dspace/handle/2097/32644>
- Kaye, D. B. V., Chen, X., & Zeng, J. (2020). Co-evolution of Chinese mobile short video apps: Parallel platformization of Douyin and TikTok. *Mobile Media and Communication*, 1–20. <https://doi.org/10.1177/2050157920952120>
- Kaye, D. B. V., & Gray, J. E. (2020). Copyright gossip: Exploring copyright rhetoric ideology and mythos on YouTube. In *Selected Papers of Internet Research*. Dublin, Ireland: Association of Internet Researchers. <https://spir.aoir.org/ojs/index.php/spir/article/view/11247>
- Leonardi, P. M. (2012). Materiality, sociomateriality, and socio-technical systems: What do these terms mean? How are they different? Do we need them? In P. M. Leonardi, B. A. Nardi, & J. Kallinikos (Eds.), *Materiality and organizing: Social interaction in a technological world* (pp. 25–48). Oxford, UK: Oxford University Press.
- McLeod, K., & DiCola, P. (2011). *Creative license: The law and culture of digital sampling*. Durham, NC: Duke University Press.
- Meese, J. (2014). It belongs to the Internet: Animal images, attribution norms and the politics of amateur media production. *M/C Journal*, 17(2), 1–6.
- Meese, J. (2018). *Authors, users and pirates: Copyright law and subjectivity*. Cambridge, MA: MIT Press.

- Meese, J., & Hagedorn, J. (2019). Mundane content on social media: Creation, circulation, and the copyright problem. *Social Media + Society*, 5(2), 1–9. <https://doi.org/10.1177/2056305119839190>
- Monroy-Hernandez, A., Hill, B. M., Gonzalez-Rivero, J., & boyd, d. (2011). Computers can't give credit: How automatic attribution falls short in an online remixing community. *Conference on Human Factors in Computing Systems 2011—Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 3421–3430. <https://doi.org/10.1145/1978942.1979452>
- Nagy, P., & Neff, G. (2015). Imagined affordance: Reconstructing a keyword for communication theory. *Social Media + Society*, 1(2), 1–9. <https://doi.org/doi:10.1177/2056305115603385>
- Nieborg, D. B., & Poell, T. (2018). The platformization of cultural production: Theorizing the contingent cultural commodity. *New Media and Society*, 20(11), 4275–4292. <https://doi.org/10.1177/1461444818769694>
- Orlikowski, W. (2000). Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*, 11(4), 404–428. <https://doi.org/10.1287/orsc.11.4.404.14600>
- Pappalardo, K., & Aufderheide, P. (2020). Romantic remixers: Hidden tropes of romantic authorship in creators' attitudes about reuse. *Cultural Science Journal*, 12(1), 1–12. <https://doi.org/10.5334/csci.117>
- Pappalardo, K., & Meese, J. (2019). In support of tolerated use: Rethinking harms, moral rights and remedies in Australian copyright law. *University of New South Wales Law Journal*, 42(3), 928–952.
- Perkel, D. (2016). Share wars: Sharing, theft, and the everyday production of Web 2.0 on DeviantArt. *First Monday*, 21(6), 1–24.
- Shi, S. S., & Fitzgerald, B. (2008). A relational theory of authorship. In M. Perry, & B. Fitzgerald (Eds.), *Knowledge policy for the 21st century: A legal perspective* (pp. 1–17). Sydney, Australia: Federation Press.
- Shifman, L. (2013). Memes in a digital world: Reconciling with a conceptual troublemaker. *Journal of Computer-Mediated Communication*, 18(3), 362–377. <https://doi.org/10.1111/jcc4.12013>
- Sinnreich, A. (2010). *Mashed up: Music, technology, and the rise of configurable culture*. Amhurst: University of Massachusetts Press.
- Suzor, N. (2013). Access, progress, and fairness: Rethinking exclusivity in copyright. *Vanderbilt Journal of Entertainment & Technology Law*, 15(2), 297–342.

- Tan, C. (2018). *Regulating content on social media*. London, UK: University College London Press.
- Tehrani, J. (2011). *Infringement nation: Copyright 2.0 and you*. Oxford, UK: Oxford University Press.
- TikTok. (2019). *TikTok transparency report*. Retrieved from <https://www.tiktok.com/safety/resources/transparency-report>
- TikTok. (2020). *#fyp (count)*. Retrieved from <https://www.tiktok.com/tag/fyp?lang=en>
- Towse, R. (2006). Copyright and artists: A view from cultural economics. *Journal of Economic Surveys*, 20(4), 567–585. <https://doi.org/10.1111/j.1467-6419.2006.00256.x>
- Urban, J. M., Karaganis, J., & Schofield, B. (2017). Notice and takedown in everyday practice. *UC Berkeley Public Law Research Paper No. 2755628*. <http://dx.doi.org/10.2139/ssrn.2755628>
- Venturini, T., & Latour, B. (2009). The social fabric: Digital footprints and quali-quantitative methods. *Futur En Seine 2009, May 2009, Paris, France. Cap Digital, Proceedings of Future En Seine 2009, 2010*, 87–103. Retrieved from <https://core.ac.uk/download/pdf/47340799.pdf>
- Woodmansee, M. (1992). On the author effect: Recovering collectivity. *Cardozo Arts and Entertainment Law Journal*, 10, 279–292.