



East Asian pop music idol production and the emergence of data fandom in China

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Abstract

This article traces the formation of popular music idol industries in China and the emergence of data fandom. It charts the growth of digital platforms and historicizes the commercial and geopolitical itinerations linking cultural production in Japan, South Korea, and China. It locates data fandom as an integral part of the popular music industries reconfigured by digital social media platforms; a structural change from the production-to-consumption ‘supply chain’ model of the recording era towards emergent circuits of content that integrate industries and audiences. Data fans understand how their online activities are tracked, and adopt individual and collective strategies to influence metric and semantic information reported on digital platforms and social media. This article analyses how the practices of data fans impact upon charts, media and content traffic, illustrating how this activity benefits the idols they are following, and enhances a fan’s sense of achievement and agency.

Keywords

Chinese idol production, Chinese music industry, data, digital platforms, fandom, K-pop, recording industry, social media

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Tracing the development of the popular music idol industries in China, this article aims to make theoretical, analytical and empirical connections between transnational East Asian cultural production and fandom as interrelated issues, debates and areas of research. Our aim is to contribute to the study of how digital platforms and social media link industries, pop idols and fans. In a broader context, the article builds upon and extends studies of the articulations of cultural production and consumption (du Gay et al., 1997; Livingstone, 2019).

Our argument is presented in two linked sections through which we emphasize the interrelationships of industries and fans. First, we provide an account of the formation of popular music idol industries in China, highlighting the rapid growth of digital platforms and the commercial, cultural and geopolitical connections linking idol production in Japan, South Korea (hereafter ‘Korea’) and China. We then emphasize how fandom is an integral component of popular music idol industries that have been reconfigured by social media, digital platforms and data visualization. In this introduction we outline our theoretical and conceptual approach, and briefly explain how we draw on interviews with fans to illustrate our discussion of data fandom.

First, this article is offered as an addition to knowledge of the historical development of popular music idol industries in China since the emergence of the digital platform economy and social media (Li, 2013; Tang and Lyons, 2016). This is located within the context of a ‘transnational production system’ linking Japan, Korea and China (Mōri, 2011), and the transborder exchanges that have characterized systems of recorded music across East Asia (Shin, 2009a). In adopting this perspective, we challenge approaches to popular music production that emphasize national contexts, such as Lee Marshall’s (2013) edited collection on the international recording industries, featuring Masahiro Yasuda’s (2013) chapter on Japan.

Second, we introduce the idea of the data fan (*shù jù fēn*, 数据粉), a phrase we have drawn from its everyday use among fans in China. This term was initially associated with followers of K-pop idols after the Korean wave reached its peak in China during 2016, and subsequently entered the lexicon of fans engaged with many types of entertainment. A data fan understands how their online activities are monitored and tracked to produce metrics that quantify variables measuring the popularity of performers; semantic information cataloguing the meanings associated with performers; and sonic data that register the most frequently accessed musical characteristics of tracks (Negus, 2019; Prey, 2016). Data fans adopt individual and collective strategies to deliberately intervene and to influence the statistical, sonic and semantic data collected by and reported on digital platforms and social media. Fans recognize their importance as data and use this to benefit the musicians or idols they are following, and to enhance their sense of achievement and agency.

Our discussion of data fandom is informed by insights from anthropological research illustrating how digital platforms are embedded into the routines and relationships of human life, rather than ‘external’ objects exerting effects upon us (Miller et al., 2016). We connect to studies of how people use platforms and social media with an awareness of datafication and an understanding of the ‘logic’ of social media platforms, actively using their knowledge to ‘develop tactics to intervene in it’ (van der Nagel, 2018: 83). We also take inspiration from Nancy Baym’s (2018) discussion of how social media

platforms have facilitated a more ‘intimate’ sense of connection between musicians and their fans, entailing obligations for audiences and artists. By using the concept of data fandom, we wish to extend these ideas and elaborate on how fans seek to intervene and to influence data as part of their everyday fan activities and to maintain their connections to a performer.

In discussing data fandom, we draw from scholarship on how data, datafication and algorithms are changing human understandings of personal identity and social life. John Cheney-Lippold (2017: 10) has argued that ‘when we are made of data, we are not ourselves in terms of atoms. Rather, we are who we are in terms of data’. This does not simply involve voluntarily and freely ‘constructing the self’ as a social-psychological entity within a digital world of avatars or online personas, as suggested by Cynthia Carter Ching and Brian Foley (2012: 10). As Cheney-Lippold argues, ‘it is our data that is being watched, not our selves’ (2017: 21). Our data only really becomes ‘us’ when it is useful (2017: 251). He argues that data has allowed us to adopt a ‘codified interpretation of life’ and an understanding of how the ‘world is being defined’ through data (2017: 251). Although Cheney-Lippold is concerned about the consequences of this, observing that ‘as everything we do becomes datafied, everything we do becomes controllable’ (2017: 262), he avoids assuming that ‘the self’ can in any straightforward way be oppressively ‘colonized’ and ‘appropriated’ by capitalism (Couldry and Mejias, 2019). Data fandom is more than ‘digital fandom’ (Bennett, 2014; Booth, 2010), a term describing how fans use digital media to acquire, communicate, share and organize knowledge. Data fan is a ‘self-concept’ (Perry, 2010) that conveys the way fans knowingly adopt a specific identity – a ‘codified interpretation of life’ – as they seek to influence the very data through which they are codified.

Bridging these two interconnected issues and themes – the emergence of a popular music idol industry and datafication of fandom – is the way platformization of social media has allowed for the integration and influence of fans within East Asian idol production specifically, and the music industries and cultural production more generally. Here we draw from and add to research conducted in the USA and Europe which has suggested that digital platforms and social media have incorporated fans as a type of ‘labour’ that can benefit musicians and industries (Morris, 2014), and less oppressively as ‘sponsors, co-creators of value, stakeholders, investors, and filters’ (Galuszka, 2015). Rather than suggesting that the activities of fans can be viewed as a type of work that is co-opted or exploited to benefit business (unpaid labour and paid leisure are frequently blurred even for those formally employed in the music industries), we build upon studies that have demonstrated how cultural production entangles the mutual independence and interdependence of fans and industries, in East Asia more generally and K-pop specifically (Choi and Maliangkay, 2015; Lee and Nornes, 2015).

Our account of data fandom is located within a study of idol industries and ‘Little Fresh Meat’ (*xiǎo xiān ròu*, 小鲜肉) in China. ‘Little Fresh Meat’ is a term originally used by Chinese fans during 2014 to label Korean idols; an expression imbued with sexual innuendo, subverting a cannibalistic metaphor more usually used to refer to women. The phrase was rapidly adopted to characterize young male celebrities (actors, singers, models) presented with exquisite make-up, delicate skin and exaggerated elegance. We will be emphasizing how Little Fresh Meat idols emerged from networks that

connect J-pop to K-pop and to fandom and digital platforms in China. Our argument builds upon studies of fandom in China (Fung, 2009), and those that have emphasized the transnational characteristics that link fans across East Asia (Chen, 2018). The style of Little Fresh Meat is consistent with idol identities across East Asia, with such an appearance labelled as *bishounen* ('beautiful youth') in Japan and *kkonminam* ('flower boys') in Korea (Murell, 2019).

There are two main reasons for using Little Fresh Meat as our example of data fandom in this article. First, data practices were adopted most prominently among fans of Little Fresh Meat prior to being adopted by fans of other musicians and entertainment forms. Second, Little Fresh Meat emerged at an important historical moment in the development of Chinese idol production. This focus allows us to illustrate the links that connect industries and fans in Japan, Korea and China specifically, and popular music industries, social media platforms and fan practices more generally.

The research for this article involved the study of existing primary sources and secondary literature, along with related commentary and comment in English and in Chinese online publications, information portals and blogs (such as *163*, *Sohu*, *Sixth Tone*, *Douban* and *Sina*), and accounts accessible via WeChat and on social media (such as Weibo and Baidu). The discussion in the later sections of the article is informed by exploratory, qualitative interviews with 16 Chinese fans, carried out between April 2018 and May 2019 (conducted by Qian Zhang). Four fans were interviewed face-to-face in person to explore issues about popular music fandom in China, conducted for preliminary research that was not formally part of this specific study. Having reviewed these initial interviews, we decided to focus on the issues discussed in this article, and carried out follow-up interviews with two of these fans and 12 additional fans. All interviewees were self-defined female popular music idol fans, over the age of 18, with the oldest being 26 years old. All interviewees were university educated. Respondents were chosen for their willingness to reflect upon their experiences and to provide insights into practices and processes. This entailed word-of-mouth recommendations, and what is sometimes called 'snowballing'.

The interviews were naturalistic and conversational, allowing participants to talk about how our topic related to their lives. We drew our approach from a long tradition of qualitative research and conversational interviewing (for related recent summaries see Athens, 2010; Roulston and Choi, 2017). We treated interviews as a social encounter during which partial knowledge and understanding can occur, and particular interpretations can be arrived at. Our approach to interviewing was informed by interpretative sociology, and by what Anthony Giddens called the 'double hermeneutic', whereby researchers draw from the reciprocal interplay between people's vernacular interpretations of social life and the more formal concepts and theories developed by scholars (we did not pursue interviews to collect 'data' amenable to forms of 'coding'). All interviewees were aware that they were contributing to an academic study and that any quotations would be reported anonymously. Hence, the interviews were not in any way used as a 'representative sample' but to gain an insight into practices, dynamics and perspectives. We have quoted from interviewees sparingly, contextualizing quotes when necessary and placing their voices in relation to other discussions of the same or related practices. This more detailed discussion of data fandom is located within the context of the commercial,

cultural and geopolitical itinerations that have shaped the pop idol music industries in China.

The itinerations of East Asian pop music industries, the Korean wave and the digital dynamics of idol production in China

The idol industries in China and the concurrent growth of data fan practices are directly related to *Hallyu* (Korean Wave, 韩流), commonly narrated as a tale of two waves. First, a localized wave in East Asia from the 1990s and a second wave, sometimes referred to as *Hallyu* 2.0, facilitated by digitalization, mobile and internet communications and social media. This second wave was underpinned by national recognition of the economic significance of *Hallyu* and strategic financial investment from the Korean government (Hong, 2014; Jin, 2016; Kwon and Kim, 2014). Shaped by the digital economy and a more global market for K-pop, it is part of the historical context for understanding the formation of social media platforms and idol production in China.

The popularity of K-pop idols in China (*Hallyu* 1.0) can be traced to the ‘normalization’ of relations between Korea and China after 1992, which allowed for an expansion of trade and tourism, young people moving to study in China, along with media liberalization facilitating the growth of television ownership (Sun and Liew, 2019). *Hallyu* gained fans in China from the mid to late 1990s, and K-pop fandom increased after 2008 as the digital and mobile economy rapidly expanded (Zhang and Fung, 2017).

In this section we identify the factors that contributed to the Little Fresh Meat idol industry in China, and the broader contexts within which data fandom emerged. These are: (a) the legacies of a Japanese model of idol production and its influence on K-pop; (b) Korean companies expanding the market for K-pop by producing Chinese-language songs and creating bands composed of Korean and Chinese performers; (c) Chinese companies strategically investing in the Korean entertainment industry, deriving an economic return from a booming sector, and seeking to draw on Korean industry expertise; (d) Chinese government investment in digital infrastructure and the ICT/ mobile sector; (e) the growth of Chinese digital platforms needing content and Korean pop sourced to fill that content; (f) political tensions between China and Korea that led to a restriction on the selling and promotion of Korean idols in China and caused a space to open up for the development of Chinese idols. We now move through these points in more detail.

Although film and television stars had become popular in China throughout the second half of the 20th century, a new type of idol industry began to emerge, gradually from the late 1990s, due to the influence of the production team methods associated with K-pop and the growth of the digital economy and social media. The K-pop production system is usually attributed to Korean entertainment companies, with Star Museum (SM) Entertainment often cited as the most influential. Starting as a studio in the 1980s, SM grew to incorporate songwriting, production and recording, and then fused this with the operations of a talent agency, management company and concert promotion (Russell, 2008). JYP (Jin-young Park) Entertainment and YG Entertainment (founded by Yang Hyun-suk or ‘Yang Goon’) adopted this approach, dealing with all aspects of a performer’s education, music and performing skills.

Korean contributions to the development of East Asian idol production should not be over-emphasized as they are indebted to Japan in (at least) four ways. First, SM Entertainment was modelled on Johnny and Associates, a talent production company first established in Tokyo by Johnny Kitagawa in 1962. Kitagawa's company had, in turn, been influenced by systems of stardom in the United States (notably Motown Records) that had combined talent spotting and casting, education and training, music production and media presentation (Kim, 2018). Second, the visual aesthetic of K-pop was influenced by the way Japanese music and idol industries, from the early 1970s, had sought to develop cute yet ordinary young idols, with a pretty-boy and -girl aesthetic influenced by the unblemished two-dimensional images of manga animation (Machiguchi, 2018). Third, Japanese talent companies and J-pop industries encouraged fan involvement and influence in the careers and identities of idols from the earliest days (Galbraith, 2018). Fourth, Korean music idol production was shaped by 'transborder' exchanges with Japanese industry personnel and producers after the Korean government lifted its ban on Japanese culture in 1998 (Shin, 2009a). The very category of K-pop was introduced by Japanese music companies. Hyunjoon Shin has shown how early K-pop was J-pop, with Korean singers performing songs written, arranged, produced and marketed by Japanese music industry personnel and their companies (Shin, 2009a). The result was a fluid model of popular music idol production, with individuals blurring and crossing boundaries between the roles of 'songwriter-arranger, recording engineers, managers, design coordinators' with 'East Asian characteristics . . . that . . . cannot easily be found outside the region' (Shin, 2009b: 510).

Korean companies became more influential with the development of digital platforms and social media. Johnny and Associates was established in the early 1960s, many years before digital media, and the company was slow to get involved in digital platforms. Although Japan was the first country to manufacture, market and sell CDs during the 1980s (and Sony introduced digital studio technologies during this period), the Japanese recording industry and music fans were less enthusiastic about digital files and remained attached to physical artefacts (Parc and Kawashima, 2018). The Korean music industry engaged with digitalization more rapidly than Japan. K-pop became an 'extension of Korea's high-tech culture' (Shin, 2009b), benefiting from government investment in digital infrastructure, and the advance of social media, smartphone ownership and mobile networks. Korean music production experienced 'digitalization at the fastest pace in the world' in the mid-2000s (Lee, 2009: 489), with the growth of streaming rapidly replacing digital downloads and physical formats (although CDs continued to circulate as collectable merchandise rather than as a format for listening to music on a discrete music player).

Just as state investment in digital infrastructure was important to the growth of Korean entertainment, so it shaped the development of the internet, social media and mobile economy in China. There are two aspects to this. First, is the role of the Chinese government in implementing the tenth five-year plan on the information industry (2001–5), strategically allocating direct financial investment and establishing economic incentives to facilitate research and the building of digital infrastructures. Second, were policies of political re-regulation after China joined the World Trade Organization in 2001. These

allowed for state-managed capitalist competition and private enterprise, and reduced restrictions on both capital investment into China and the external operations of major internet companies, such as Baidu, Alibaba and Tencent, outside of China (Jia and Winseck, 2018; Tse, 2015).

Unlike Korea, where entertainment companies had been signing and developing pop artists since the 1980s, the rapid growth of the digital economy in China led to platforms being set up that required content that was relatively scarce within the mainland recorded music industry. The commercial recording sector in China developed relatively slowly following the economic reform programme of 1978. During the 1980s the recording industry was characterized by cover versions of songs made popular in Hong Kong and Taiwan. Only limited artist development had been introduced by the end of the 1990s. In China, the digital economy facilitated platformization rather than the growth of talent acquisition, and conventional cultural production (Shen et al., 2019). This was part of a more general historical change in the music, media and entertainment industries: A shift from investment in production and manufacture (the selling of individual recordings as artefacts) towards a subscription model of access to digital content, underpinned by datafication as a means of risk management and revenue generation (Negus, 2019).

During the 2000s, Chinese urban society rapidly became one of the most developed smartphone, mobile, and data-driven economies in the world. An entrepreneurial sector sought to profit from and provide a service in response to this. Numerous start-ups began to compete intensely, setting up and acquiring networks and platforms (Shen et al., 2019), evidenced by over 1100 mergers and acquisitions ‘in the technology, media, and telecoms sectors’ during the period 2014–16 (Jia and Winseck, 2018: 49).

These platforms required content. Korean companies began to provide a large part of that content as K-pop. Notable here was SM Entertainment’s ‘cultural expansion’ philosophy, a corporate strategy pursued from the early 2000s. This entailed establishing joint ventures in order to gain access to local companies with knowledge of Chinese markets (Ye and Kang, 2017). By 2008 Korean Entertainment companies were significant providers of content for Chinese digital platforms, and K-pop idols had become major stars of music, television and the growing smartphone economy. Strategic attempts to reach Chinese audiences also entailed producing recordings sung in Mandarin (such as those by EXO and Super Junior) and agreeing endorsement deals with Chinese brands (such as Super Junior promoting hair shampoo). Bands were also put together, or re-created, to contain a mix of Chinese and Korean musicians (such EXO, Super Junior and GOT7).

Further connections were established by Chinese companies investing in the Korean entertainment industry. This had begun during the mid-1990s and became more pronounced in the 2010s. It was reported that Chinese companies invested more than two trillion won in the Korean Entertainment industry in three years, from 2014 to 2016 (Hwang, 2016). This trend led to Alibaba investing in SM Entertainment and venture capital companies taking a stake in Big Hit Entertainment (Herman, 2018). K-pop groups began to be managed through ‘bi-national’ joint ventures, with T-ara and Exid part managed by Chinese company Banana Culture, and WJSN and UNIQ (made up of Korean and Chinese musicians) part managed by Yue Hua Entertainment, based in Beijing

(Herman, 2018). Management agencies in Korea began to support their Chinese-speaking artists in China, including Yixing Zhang and Jackson Wang.

Deals between Chinese and Korean companies led to exchanges between personnel and staff, with Chinese companies 'scouting industry experts from Korea' (Herman, 2018: n.p.) to acquire information and expertise. Performers trained by Korean companies also began to return to China and pass on their knowledge, including Han Geng of Super Junior and members of EXO. Idol industries in China were influenced by the way K-pop used teams, involved fans from the earliest days, and promoted idols across social media and via product endorsements (rather than relying on the conventional route of recordings plus concerts).

These evolving relationships were disrupted in 2016 by political tensions after the Korean government deployed the Terminal High Altitude Area Defence (THAAD) system, developed by the United States, in collaboration with the US military. Although presented as protection against the growing military capacity of North Korea, it was perceived to be a threat to Chinese military operations, armed forces and weapon systems. One of the immediate responses from the Chinese government involved cancelling concerts and tours by Korean musicians, removing Korean celebrities from adverts, and refusing to allow Korean actors and musicians to appear on talent shows and TV series (Kil, 2017). Korean-produced films and contributions by Korean creative personnel to film production in China were halted. Restrictions were imposed on all music shows funded and produced by Korean companies (Sanchez, 2016). It was estimated that the Korean entertainment industry lost the equivalent of US \$54 million in revenue, and that tourism, confectionary and direct investment declined by the equivalent of US \$11 billion (Herman, 2018). Although there was no ban on the streaming of recordings by Korean performers, the immediate lack of visibility and promotion affected the popularity of K-pop. In the following 12 months, of the three major Korean entertainment companies, the share prices of SM fell 18% and YG fell 32%, whereas JYP (with little involvement or 'exposure' to China) rose 32% (Kil, 2017: n.p.).

With the Chinese digital economy expanding, there was an escalating demand for content from consumers and related industries in the music and entertainment media, as well as the concert business. Opportunities opened up for existing and newly formed entertainment companies, initially with Chinese performers who had previously been members of K-pop bands, such as Lu Han, Kris Wu, LAY and Z.TAO. Little Fresh Meat now became a term for Chinese idols performing K-pop (just as early K-pop was Korean idols performing J-pop). Almost immediately Chinese idols filled the gap created by restrictions on Korean content and a more clearly defined Chinese idol system emerged, derived from production methods and aesthetic styles developed in Japan and Korea and focused on social media and digital platforms.

These commercial, technological and political relationships form one thread of our story, as interwoven popular music idol industries and pop fandoms developed across East Asia and in China. With the increasing introduction of digital platforms, social media and smartphones, fans came to play a decisive part in the development of a new type of content trafficking and data practice. The recorded music industry was being reconfigured: shifting from a business that created and supplied products for purchase

by consumers, according to a linear or ‘supply chain’, towards a circuit within which cultural and economic value accumulates as active fans (along with musicians, industries, and governments) seek to shape, edit, update and manipulate a continual flow of changing content that is, in turn, filtered by bots, curators, censors and algorithms while being constantly mined and analysed for data that loops back into further interventions. We now extend these ideas and this narrative by explaining the pivotal role of data fans in these processes.

Data fan practices: chart beating and data visualization, content trafficking and collective team strategies

Popular culture fandom in China has developed as an integral characteristic of the idol industries, and within the context of transnational itinerations linking Japanese, Korean and Chinese fans, not only in the realm of popular music, but also in anime (Mōri, 2011), manga and TV dramas (Chen, 2018; Fung, 2009). Just as Chinese pop idol production systems are linked to J-pop and K-pop, so too are the practices of fans; influencing each through ‘transborder dialogues’ (Shin, 2009a) that can allow for the adoption of nationalistic (Chen, 2018) and more global or transnational expressions of identity (Chin and Morimoto, 2013). The activities of Chinese idol fans have been inspired and stimulated by the way K-pop fandom encompassed a wide range of activities whose ‘cultural endeavours traverse the curatorial, re-distributive, artistic, and consumptive spheres’ (Choi and Maliangkay, 2015: 9).

Data fandom extends these cultural endeavours, and became more noticeable when some Little Fresh Meat idols (including Lu Han, Kris Wu, Yang Yang and Li Yifeng) became known as ‘data traffic stars’ (*liú liàng míng xīng*, 流量明星). By 2018, the category was circulating widely and Cai Xukun came to the attention of fans as a ‘new data traffic star’. Facilitated by the way platformization and social media had reconfigured the traditional recorded music industry, these stars gained their visibility and success through the active interventions of fans into the data circulating across social media.

In our introduction we referred to studies of the way social media users acquire an understanding of the logic of platforms and datafication, and develop strategies to intervene (van der Nagel, 2018). In a similar way, data fans strategically seek to impose their presence, using knowledge of the impact of data as statistics (quantities and metrics), and an understanding of how semantic data can influence an idol’s popularity and contribute to this traffic; increasing the commercial and cultural value of idols.

Fans seek to influence the quantity and quality of data circulating about an idol. Such circuits of data can continually change shape with the involvement of different participants as they alter and intervene in the loops of information that are characteristic of how social media is used and digital platforms achieve their popularity. We explore this further by focusing on three issues that were raised most frequently in our interviews with fans (a) chart beating and an expanded idea of ‘charts’ as a visualization of an idol’s success, (b) the role of formal fan clubs and less structured patterns of collectively organized behaviour and (c) the role of the data team.

Data visualized through chart beating

Chart beating (*dǎ bǎng*, 打榜) illustrates how data is visualized and used strategically. Charts provide a visual record of fan activities. Charts of various types have been used by music and entertainment industries since the early 20th century. An important change occurred during the 1990s with the introduction of EPoS (electronic point of sale) technology in retail stores and the tracking of digital radio. Retail sales and radio listening charts became based on larger quantities of data (and not small samples) and less dependent upon individual compilers (du Gay and Negus, 1994). The information about consumers accumulated and acquired by retailers and radio networks in the 1990s prefigured the data collected through charts of digital downloads and streams in the first half of the 21st century (Prey, forthcoming). These are the latest in a history of ranked lists offering a visualization of the music market; a league table that orients the creative practices of musicians, business decisions made by industry executives and the listening choices of audiences (Anand and Peterson, 2000; Hakanen, 1998). Digital platforms and social media have amplified the importance of rankings and facilitated the proliferation of other charts (searches, trends, news, tweets) and expanded the idea of participation through opportunities for types of voting, comment and feedback.

Fans are acutely aware of charts. Although ‘chart beating’ became an important part of fandom in China in the early 2000s, and then widespread across East Asia, it remains relatively under-researched. In Ling Yang’s study of reality TV, *Super Girl*, she argued that chart beating allowed fans ‘to participate in the star-making process’ (2009: 528) as ‘excessive consumers’ (2009: 529) by buying ‘repetitively in order to boost the sales numbers’ (2009: 532), and by ‘purchasing multiple copies’ of albums at different stores (2009: 533). Since her study, the rapid growth in China of social media, mobile communications and digital platforms has reconfigured chart beating; from purchasing CDs in retail stores to influencing download sales and streaming statistics, and clicking positive endorsements that contribute to an artist’s visibility. Every time an idol releases a single track or album, fans will orientate their activities towards a range of charts. Across East Asia fans target the Fresh Asia Music Chart (China), Oricon Music Chart (Japan), MelOn Chart (Korea), Hanteo and Gaon (Korea); in the United States the focus will be the *Billboard* charts and iTunes charts.

Although chart beating was recognized in China, it occasionally caused controversy, as was apparent when Chinese-Canadian rapper Kris Wu released his album *Antares* in the United States in November 2018. The collection immediately registered at No. 1 on the iTunes chart, with seven of his songs in the top 10. Ariana Grande’s track ‘Thank U, Next’ (reported by *Variety* to have the most ever YouTube views in 24 hours) registered at No. 4 on the iTunes chart behind three of Kris Wu’s tracks. Claims circulated about tracks achieving high chart positions due to fraudulent activity. Wu’s management and promoters were accused of using bots to manipulate the statistics (Halperin, 2018). While Adam Minter (2018) argued that the success of the album was orchestrated by Chinese Kris Wu fans who ‘spent their own money’ and purchased repeatedly to push his recordings up the US charts, other journalists in the US media doubted that fans in China would be able to do this due to the ‘great firewall of China’ and barriers to accessing websites in the US. Yet, chart beating beyond the firewall using virtual private networks (vpns)

had become one of the tactics used by data fans in China, and was routinely mentioned during our interviews.

The following year, the chart beating battles between rival fans, considered an accepted part of fandom in China rather than an unfair anomaly (as in the US reports on Kris Wu), were causing further comment due to the rare involvement of older fans of 40-year-old Jay Chou ‘beating’ younger fans of 21-year-old Cai Xukun. The ‘battle’ was provoked by comments that Jay Chou had few fans, with one fan’s response quoted as: ‘You can’t say Chou got no fans just because we don’t show up in data chart’ (Qing, 2019: np). Other ‘middle-aged’ fans spoke of how they learnt to use social media to raise Jay Chou’s position in the rankings. One 41-year-old fan was quoted as saying that he ‘joined the craze with a bunch of middle-aged and older people to help Jay Chou top the list’, adding that these fans usually ‘just don’t care about [social media] traffic’ (Chenyu, 2019: np).

Two fans we spoke with, in their early twenties and attending university, used the metaphor of ‘moving house’ (*bān jiā*, 搬家) when describing the great effort involved in pushing their idol from a lower position to a top three place in the charts. This prosaic metaphor might appear banal, yet the ‘metaphors we live by’ (Lakoff and Johnson, 1980) can give an unobtrusive yet profound insight into our perceptions and practices. Here it evokes the effort entailed, the symbolic importance and the sense of achievement (finally shifting to another location, a new home). Chart data affords fans a visually unambiguous sense of their contribution to an idol’s success, a record of their achievement in competitive encounters with fans of other idols, and a sense of belonging to a wider fan community.

In mainland China, all the major music streaming services – such as QQ Music, KuGou Music and Kuwo Music (all owned by Tencent), and NetEase Music – have been using music charts to encourage data gaming, to attract more users and to stimulate further online activities and spending. Platforms also link digital products to specific charts. For example, in 2014 QQ Music negotiated licensing deals to launch an exclusive ‘digital album’ (*shù zì zhuān jí*, 数字专辑) that could be accessed by download purchase only, bundling together between two and 12 tracks, as a way linking sales to chart beating. This became an important source of revenue for the platform, and for labels. It allowed artists and their management an outlet for scheduling a flow of recordings to coincide with strategic recurrent ‘comebacks’ into media visibility. The K-pop group BIGBANG was the first overseas act to sell a digital album through this platform. Subsequently, digital albums by Little Fresh Meat Idols such as Luhan and Lay have been in the Top 10 bestsellers, as have digital albums by Ariana Grande and Taylor Swift. The digital album encouraged data fans to purchase repeatedly within a very short period of time. QQ Music have also stimulated this by introducing interactive services through which fans can easily form ‘fans unions’ (*fēn sī gōng huì*, 粉丝公会) that allow them to act collectively and to receive rewards for their online activities, such as special VIP fan services or merchandise.

Recorded music charts based on sales, downloads and streams have been joined by an array of other listings. Important here is the ‘hottest search charts’ on social media platforms such as Sina Weibo, the largest micro-blogging site in China, and on Baidu, China’s most popular search engine. Sina Weibo’s charts – such as a superstar chart,

super topic chart and hottest search chart – are based on algorithms that combine a variety of traffic from the data activity of fans. This includes forwarding rates, reading rates, approval rates, and interactive rates. Data from various charts is also combined to produce aggregated charts, a practice that has become common throughout the music industries. Miaozen Systems produced a list of the ‘most commercially valuable’ Chinese idols for 2018 based on data collected from major platforms, including Sina Weibo, Taobao, WeChat, Baidu and TikTok (Liu, 2019). These chart visualizations of amalgamated data orient the marketing strategies of businesses seeking to sponsor or gain product endorsements from idols, and inspire ever more activity from data fans.

Hashtags are one of the most visible types of social media communication, allowing users with no pre-existing followers to find and connect with each other (Schmidt, 2014). Hashtags can be adapted for various uses and easily discarded or re-shaped (Gerrard, 2018). They are an integral part of the Weibo ecosystem, and have become important for digital platform commerce and social media more generally. Hashtag charts are indicators of keywords, trending issues, the popularity of idols and other celebrities, and enable social media platforms to produce ranked lists and to create data from ‘semantic analysis of online conversations about music’ (Prey, 2016: 33). Fans use hashtags as a further way of generating data about idols and to label content in a way that makes it discoverable by other fans and social media users. This contributes to the rankings of popular hashtags and, more broadly, feeds into fans’ knowledge and awareness; it also has an impact on the way fans attempt to influence a wide range of charts.

Fan clubs and the collective organization of data fandom

Chart beating does not happen spontaneously. It requires strategic planning, coordinated cooperation, and investment in time and resources through which fans act collectively and individually. Chart position, across all available listings, is one of the most visible indicators of an idol’s success, and is supported by activities that directly contribute to the data traffic that will benefit an idol.

Organization is through ‘fan clubs’, in the general sense of that English-language term. The Chinese equivalent is supporting club (*hòu yuán huì*, 后援会). Fan clubs have been present throughout the history of popular music, dating back at least to the early 20th century; often encouraged, supported and financed by performers and artists’ management (Baym, 2018; Théberge, 2005). Despite links to industries, fan clubs in China were initially run by fans in their spare time and organized voluntarily by members of fan communities, often by young women with day jobs in the media industry, often in promotional or creative occupations (Yaoti, 2016). Fan supporting clubs in China, like those in Korea and Japan, developed as a way of organizing public activities that visibly demonstrated support for an idol.

The fans interviewed for this article spoke of how they observed an ethics of responsibility, approaching idols with a sense of duty or moral obligation; values that informed their commitment to rewarding and supporting an artist. This is widespread. An ethics of fan responsibility is embedded into everyday encounters and actions, and is an attribute shared by idol fans in China, Korea and Japan (Lee, 2015; Zhang and Fung, 2017). This commitment may be demonstrated ostentatiously, when fans place images on public

screens or billboards (in Times Square in New York City, for example), coordinate lights shows in city centres, fly banners across the sky, and greet idols when they arrive from a flight or are staying at a hotel (Shuhong, 2019). These activities are mainly financed by crowdfunding. Following accusations that donated money was being pocketed by dishonest members of clubs, during 2018 crowdfunding transactions began to operate through third party apps such as Ohwhat, Doki and Super Fans Club.

The growth of digital platforms and social media has resulted in online supporting clubs that are more fluid, changeable and less formally structured. These operate less as conventional membership clubs and more as data information hubs and focal points for action, within and across social media platforms such as Sina Weibo, WeChat, QQ and Douyin. Supporting clubs can have a variety of functions that may not always be acknowledged, agreed upon and recognized by participating fans. Some clubs retain formal organization, with small groups of administrators and roles such as chairperson, vice chairs and leaders of teams such as ‘fan art team, a photography team, a video team and a writing team’ (Liu, 2019). Yet, many are much less formally organized and operate in a more opaque, dispersed, and networked manner. Idols may be supported by literally hundreds of relatively fluid online club groupings of various sizes, configurations and followings.

Data teamwork and individual fulfilment

Despite the variety of fan club groupings, an important role is accorded to what has become known as the ‘data team’ (*shù jù zǔ*, 数据组). The data team are a group of dedicated, skilled fans with extensive knowledge of digital platforms, and who understand the technical processes driving algorithms and enabling loopholes. The team collect data from various platforms and prepare strategies for intervening, guiding other data fans who may not have such technical knowledge. Our interviewees discussed how, in fan circles and across social media, the phrase ‘fucking the data’ (*cào shù jù*, ++数据) has become commonly used to signal the way fans act socially to strategically manipulate, modify and intensify the data traffic about idols. The practices of these fans are consistent with the findings of social media researchers who have highlighted how certain users acquire an understanding of the social media logic of datafication and connectivity, and develop tactics for intervening and generating influence (van der Nagel, 2018).

Individual fans within the ‘data team’ will have access to information about those affiliated to the club and may use this to allocate individual fans into groups according to a specific task, for example ‘reposting (*lún bó*, 轮博), anti-criticism (*fǎn hēi*, 反黑), purifying comments and news (*kòng píng*, 控评)’ (Liu, 2019). Instructions maybe also be issued on how to play or stream tracks repeatedly; how to use more than one account; how to use overseas proxies to bypass the great firewall; how to use systems of online voting to influence ratings on various platforms and social media. The data team may also suggest the wording of statements that should be posted against ‘enemy fans’ (*hēi fěn*, 黑粉), and give advice on how to remove online negative remarks about idols. When data fans have completed allocated tasks they may be rewarded with merchandise or tickets to exclusive events that the data team have acquired directly from the idol’s

company. The teamwork involved may be formally organized or may be loose and disorganized and rely on individual efforts that are conveyed through social media.

One fan (whose everyday occupation involved importing overseas products), explained how she had been participating in a data team of a very well-known Chinese idol; a star with many millions of fans visible on the Sina Weibo site. She worked on a ‘data site’ or ‘digital hub’ (*shù jù zhàn*, 数据站). She identified specific practices that were divided up among various participants in the following way: (a) being a member of the Weibo observing team (*dīng bó zǔ*, 盯博组) and keeping watch on the real-time changes across various charts; (b) managing the social media account (*pí xià zǔ*, 皮下组) and being responsible for posting to Weibo and responding to private messages from fans; (c) coordinating the Weibo controlling team (*kòng bó zǔ*, 控博组) that responds to any observed changes and rapidly intervenes to influence comments and encourage positive statements from fans, producing large quantities of forwarding, and eradicating negative comments from ‘enemy fans’ (*hēi fěn*, 黑粉); (d) being a member of a data statistics team (*shù jù tǒng jì zǔ*, 数据统计组) and summarizing various metrics about an idol each day, and reporting this to other fans.

Strategically using data to elevate the position of idols within the charts takes place alongside the creation and re-use of various media content, and this further amplifies the visibility of an idol and increases data traffic. Fan activities here include making or modifying videos, emojis or jokey memes; writing and circulating blogs; editing and trafficking images and photos of idols; creating brief witty comments within Sina Weibo’s limit of 140 words; forwarding and sending out gossip; continually streaming music (a practice engaged in by many fans, and known as ‘breathing streaming’ among K-pop fans). All of this activity increases the idol’s visibility, and contributes in an indirect way to the position of idols in various charts.

Data fandom has become an integral part of the experience of fandom. One fan in her early twenties, who was studying at university, used the metaphor of ‘generating electricity power with love’ (*yòng ài fā diàn*, 用爱发电). This is, again, another everyday metaphor that conveys the subjective experience of the type of ‘power’ – or energy – that is created. Consistent with many other studies, fans spoke of ‘growing up with their idols’ and of their ‘responsibilities’; if they do not make an ‘effort’ the idol will be unsuccessful. One member of a data team explained how she would wake up early and enthusiastically work on various data sets and tasks. She spoke of her idol giving her ‘emotional support’, particularly when she had to work overtime, and said that ‘we are struggling together from sunrise to sunset’. On returning from her routine job, working as an intern (business not disclosed at her request), she would check various charts and social media and gain a ‘feeling of achievement’ when observing the changes brought about by her skills and actions. Other fans compared the fun and thrill of data fandom to other collective activities such as playing games or sports.

Some media commentators in China have suggested that the popularity of Little Fresh Meat idols has afforded an alternative arena for expressing desire (Yung, 2018). The very phrase Little Fresh Meat is bolder than the term ‘flower boys’, and is more obviously a perspective on male identities perceived from the ‘opposite of the male gaze’, with idols ‘viewed as sexual objects whose fans don’t attempt to hide their erotic lust’ (Haiyun, 2016: np). While this may well be true, and related to an increasing engagement with

feminist ideas, our interviewees had mixed opinions on this issue. One view, expressed by some fans we spoke with, is that data fandom – directed by girls and young women across social media – has provided female fans with a sense of control and achievement, a feeling of greater certainty and confidence, and even empowerment. However, other fans had doubts about whether fan practices did much to ‘empower’ women as individuals or collectively. One fan, who had left university and who was working, remarked that data fandom was more related to ‘vanity’ and a public display of knowledge and fan devotion. As mentioned earlier, we spoke with fans who were willing to reflect on their experiences. The value of such an approach is that it can provide an insight into these competing perspectives and different experiences. However, more research would be needed to take this further and to explore the social and collective meaning of these practices, their psychological motivations and rewards, and any broader social consequences. This would inevitably require further research beyond the scope of this small study.

Concluding comments: data fandom within content circuits of cultural production

Data fans are integrated into dispersed circuits of content as traffic in data becomes central to popular music platform economies. Data traffic has become an asset valued by fans and industries alike. The value loops linking performers and fans have developed most rapidly within the idol industries of East Asia, due to the influence of J-pop, K-pop and the growth of social media platforms; facilitated by investment in the digital economy and mobile communications. East Asia is where the most visible structural realignment of the value chains of the older recorded music industry has occurred; from the production-to-consumption ‘supply chain’ model of the recording era towards emergent circuits of content that integrate industries and audiences. The role of fans in maintaining idol production is just one part of a much longer history that might be narrated about fandom–industry relations across the geographical region of East Asia, and beyond.

In this article we have drawn the concept of data fandom from research on industries and fans in China. It is an activity that has become more widespread, although neglected in academic studies. We hope this category provides further opportunities for exploring the way fans engage with stars and musicians, platforms and social media, in other contexts and situations. The practices and experiences of fans, and their comprehensions of self and social belonging, ultimately move us beyond pop fans’ use of digital media as a means of interacting with idols, and towards the datafication of private and public life and the varied ways in which this is shaping how we experience being human and acting in the world.

‘Data’ has always been part of human understanding of individual and collective behaviour. The use and manipulation of data in human societies has been traced back by various scholars to markings on artefacts about 20,000 years old found in what is modern Africa, and to Babylonian data systems on cuneiform tablets estimated to be about 6000 years old (Holmes, 2017). Data fandom is new – in that it becomes salient with digital technology and social media. Yet, it is part of a much longer story of how human understanding of self and others, and the will to influence the social world, is informed by

‘data’ and a ‘codified interpretation of life’ (Cheney-Lippold, 2017). The concept of data fandom that we have adopted in this article is not collapsible into celebratory notions of a free and creative ‘constructed self’, nor the idea of a more pessimistic, controlled and ‘colonized self’. Data fans use a new type of knowledge and a particular ‘self-concept’ when acting to achieve a series of specific aims. They also continue to participate in the fun and frustrations of being a pop fan.

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