# COMMUNICATION & SOCIETY

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# Online prosumer convergence: Listening, creating and sharing music on YouTube and TikTok

## Abstract

**Social media and prosumers have encouraged participatory creativity in the era of platformization. In this context, successful platforms such as YouTube and TikTok have facilitated users interact with music content in a wide variety of meaningful and evocative videos. In the light of research on the cultural prosumption of Internet content, as well as the global exchange of musical data, which is leading an emerging and innovative digital convergence, this study analyses the intersection between digital music and users through the Music Prosumer Questionnaire (MuPQ). This tool consists of three dimensions and 21 items based on (a) music preferences, (b) use of social media, and (c) music engagement. For this purpose, we collected the response of 698 users from Spain and Italy. The results showed that digital and visual music is essential to users' life as a means of expression and relationship with other people. In particular, in their role as music curator, are more interested in "music watching" than in blind listening, which is related to mainstream music viewing dynamics. These findings provide new insights for understanding how music evolves according to the relationship between users and social media beyond technological progress.**

## Keywords
**Social media, music video, platformization, user-generated content, musicking, questionnaire, prosumer.**

## 1. Introduction

Popular and mass culture have merged towards cultural convergence, which is a phenomenon that combines markets and consumers through the media and Internet, providing a set of platforms that have created new opportunities for user–generated content or UGC (Jami–Pour *et al.*, 2022). As Hernández–Serrano *et al.* (2017) noted, digital group behaviors are based on new social ideas that are changing how information is produced and consumed today. In this context, social media have impacted the daily practices of people, who build profiles to exchange and create content. This society synthetizes the information exchange in a connective world where platforms are becoming leaders of people's lives, influencing social and civic practices, and disrupting democratic processes (van Dijck *et al.*, 2018).

Social media are facilitating the spread of content across different environments. This means that the so-called prosumers –producers and consumers of content (Bednarz, 2022)– constitute a key element for the current society, because such profiles sustain the market

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while consuming, sharing, and remixing digital content (Edlom, 2022). This phenomenon has promoted renowned international platforms such us YouTube and TikTok, in which the video-music content plays a leading role. Since its beginnings as a website in 2005, YouTube has grown into the leading content creation platform in the world, becoming the second most visited website in the world (Statista, 2021). Over the last few years this site has significantly expanded among the audience with a diversity of topics such as music, video games, fashion, and others. Featuring approximately one million hours of video uploaded every day, this platform focuses its videos on peer-to-peer relationships, connecting vlog formats that display contents with a high social profile (Balleys *et al.*, 2020). In this sense, YouTube is considered a suitable platform for sharing long videos over 10-20 minutes compared to new short-form video apps (Wang, 2020).

On the other hand, TikTok is a platform that first became the most popular App in 2020 with 850 million downloads after its merger with the Chinese platform Musical.ly (Business of Apps, 2021). On TikTok, users can share up to 10-minute-long lip-syncing or pre-recorded videos from the extensive audio and music library. This App allows users editing their videos adding filters, among other effects. The platform passes content through an artificial intelligence algorithm based on user interactions, and a randomized content structure that displays short viral content with conceptually limited narrative, but unlimited creativity (Zulli & Zulli, 2020).

The content evolution from a web space to a social media platform of extensive videos through the platformization process (Zhang, 2020) is the influence of economic and infrastructural extensions of digital platforms on the production, distribution and cultural circulation of content (Nieborg & Poell 2018). This turns YouTube and TikTok into the target of international media research (Michalovich & Hershkovitz 2020). On this backdrop, this study aims to analyze the convergence between people and digital music through YouTube and TikTok. To this end, we developed the Music Prosumer Questionnaire (MuPQ) in order to examine and compare the Western practices carried out in Spain and Italy.

## 2. Literature review

### 2.1. *Production and consumption convergence on music platforms*

Music is an integral part of our human society (Brown, 1999). Its melodies stimulate emotions and inspire cultures around the world (Naveed *et al.*, 2017), becoming an intellectual, artistic, technological, and economic source in which much money and time is invested (Szymkowiak *et al.*, 2020). According to Nieborg and Poell (2018), the technological nature of music has changed the song into a platformization phenomenon (Zhang & Negus, 2021) due to the disruptive role of the recording industry over the years (Prey *et al.*, 2020). From Web 1.0 to 2.0 and beyond, digital technologies have provided a proactive engagement between music, system and users (Selva-Ruiz & Fénix-Pina, 2021). Therefore, since beginning with the purchase of a traditional disc, today, users have the opportunity to connect with their pop and rock idols, as well as communicate with other lovers of their favorite songs.

Historically, musical devices have experienced very unique periods that are linked to what Green (2016) calls 'peak music experiences.' This means practices in which affection for music cross each other, creating a collective cultural memory that connects communities with heterogeneous musical tastes (Bennett & Rogers, 2016). Websites and Internet broadcasting platforms, together with lower-cost production systems such as streaming services (Magaudda, 2021), have made it easier for listeners to find music-visual pleasure in online environments (Hamilton, 2019). These music spaces are sites that are adapted to the development of performers, who use social media as a meeting point with other individuals who love music and videos.

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Due to the evolution of the creative industry, there are some studies that have tried to analyze the experience of consumers in relation with entertainment, culture, and music. It starts with the Social Presence in Gaming Questionnaire (SPGQ) study (de-Kort *et al.*, 2007), which focuses on the video game, the player and the concept of social presence. Targeting players, this questionnaire analyses the online social experience with a scale of 25 items related to empathy, negative feelings and behavioral engagement. Concerning music, Chin and Rickard (2012) presented The Music USE (MUSE) Questionnaire to evaluate musical engagement. Through 124 items, the scholars evaluated the cognitive and emotional engagement between music and the individual. The psychologists Vanstone *et al.* (2015) also developed the Music Engagement Questionnaire (MusEQ) with 35 items to analyze music engagement in daily life. In addition, they found an overall rating of 'musicality' among the participants. Finally, the media behavioral scholars, Kintsche *et al.* (2015), went a step further with the Motives for Listening to Music Questionnaire (MLMQ). This was a four-dimensional approach –social, enhancement, coping and conformity motives– to understand young people's musical motivations.

## 2.2. *YouTube for music: performing online songs*

Traditionally, the music industry has been based on high economic investment. Currently, online platforms have allowed for a quick spread of music in a competitive environment, full of multiple options for users, and where music has no borders (Fraser *et al.*, 2021). This consumer culture has made music videos popular, expanding them from television to the Internet, and more specifically to YouTube. Currently, recording a video with a smartphone and uploading it to YouTube is relatively simple. Users may participate creating music videos, experimenting with the whole prosumer process (Vizcaíno-Verdú *et al.*, 2021a), beyond corporate influence and effectiveness, brand image, and engagement (Park *et al.*, 2018). This means that users try to self-express their identities through music in a social, digital and global environment (Smith & Secoy, 2019).

Some scholars carried out studies where they showed the centrality of music on YouTube (Green & Burgess, 2009; Cayari, 2011) and the potential of UGC, introducing new ways of receiving, exploring, discovering, and sharing intercultural music (Airoldi *et al.*, 2015). The platform provides the opportunity to generate creative experiences and introduce musical practices of high social relevance, instead of using physical spaces and hard artefacts (Cayari, 2017).

## 2.3. *TikTok for audio: short-music content*

YouTube is not the only representative platform for the video sharing industry and UGC. Over the years, different applications have appeared such as Vimeo, Vine or Snapchat, focusing huge amounts of content on mobile phones (Shutsko, 2020). The Chinese company ByteDance launched the Douyin application in 2016, creating a twin international application in 2017 called TikTok. With more than 1.5 billion downloads worldwide, TikTok allows users to create music, lip-sync videos, and loop videos up to 3 minutes long (Bhandari & Bimo, 2020). The content of TikTok is structured in two formats: (1) the 'following' feed, very similar to Instagram, which allows you to follow other users (Jaramillo-Dent *et al.*, 2020); and (2) the 'For You Page' feed, which shows videos through an artificial intelligence recommender system.

As Shutsko (2020) pointed out in her study about user-generated short videos on TikTok, the attractiveness of this kind of content is shown as a functional extension of the Instagram 'stories.' However, what makes TikTok different from other platforms is the ease of exchanging and discovering generally funny (Tejedor-Calvo *et al.*, 2022) and creative content in a few seconds (Abidin, 2021). As its slogan claims, 'Make your day.' In this sense, Wang (2020) suggested in a humor and camera view study on TikTok-DouYin, that short-form videos are a product of fast-paced modern life, which are designed to capture the attention of users.

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The platform is characterized by the ease-of-use of music, or the creation or remixing of sound. Thus, TikTok promotes imitation performance, mind relaxing, attractive music dubbing, among other audio formats (Vázquez-Herrero *et al.*, 2020). The hybrid, interactive and musical character of this platform (Kaye, 2022) is closely linked to the musers –influences from its precursor Musical.ly– allowing users to recycle music and audio to create #MusicChallenges (Vizcaíno-Verdú & Abidin, 2022), which consists of participating in challenges created on the platform for musical purposes. The singularities of the platform illustrate people's daily lives through background music and special effects (Kennedy, 2020), turning them into music and dance routines (Boffone, 2021) which necessarily lead to political (Cervi *et al.*, 2021) and musical empowerment discussions (Vizcaíno-Verdú & Aguaded, 2022).

In short, YouTube and TikTok are based on intrapersonal engagement where there is a convergence between algorithm and users (Bandhari & Bimo, 2020). In this context, the prosumer-generated content increases the impact of individual and collective interests.

## 3. Method

Based on the previous theoretical context, we adopted a quantitative approach. Through a questionnaire translated to Spanish, Italian, and English which was adapted to social media based on previous studies about entertainment culture, we tried to understand the prosumers' musical perception on these platforms. For this purpose, we defined the following research questions:

RQ1. What are the musical preferences of both Spaniards and Italians?

RQ2. Do Spaniards and Italians listen to, create and share music through YouTube and TikTok?

RQ3. Are there statistical differences in musical preferences between Spaniards and Italians?

RQ4. Are there statistical differences in music consumption through YouTube and TikTok between Spaniards and Italians?

RQ5. Are there statistical differences in music engagement through platforms such as YouTube and TikTok between Spaniards and Italians?

### 3.1. *Stage 1: questionnaire development*

We designed a new questionnaire adapted to the prosumers of YouTube and TikTok platforms. For this purpose, we relied on the proposals addressed in the literature review (Figure 1).

**Figure 1**. Items selected for questionnaire development.



Source: Own elaboration based on de-Kort *et al.* (2007), Chin & Rickard (2012), Vanstone *et al.* (2015), and Kintsche *et al.* (2015).

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Using the questionnaires proposed by de-Kort *et al.* (2007), Chin and Rickard (2012), Vanstone *et al.* (2015), and Kintsche *et al.* (2015), we coded the dimensions by (a) user empathy, (b) negative feelings, (c) behavioral engagement, (d) cognitive relationship, (e) emotional engagement, (f) musical education, (g) musical engagement, (h) social enhancement, and (i) coping and conformity motives concerning music. These questionnaires were selected because of the direct correlation between music, user experience and technologies, that were the main focus of the study. The process of coding dimensions, variables and indicators consisted of: (1) creating variables that grouped similar dimensions –with the same purpose– among the four questionnaires e.g., 'behavioral engagement' with 'musical engagement;' (2) creating indicators –items– that grouped it into variables.

The Music Prosumer Questionnaire (MuPQ) resulted in three dimensions and 21 items. In addition, a control data section was introduced to target the sample, adapted to both the Spanish and the Italian context, and made up of ten items (see Annex, questionnaire). The questionnaire was composed of Likert scales –except for the 'social media preference' dimension with multiple response– based on the degree of user agreement from 1- 'totally disagree' to 4- 'totally agree', in order to obtain the intensity of users' attitude.

### 3.2. *Stage 2: questionnaire validity and statistical analysis*

In the following stage we conducted a random online survey questionnaire to validate the MuPQ of experts in music, social media, and quantitative methodologies. For this purpose, we administrated and received the response of 10 university experts from Spain and Italy –five Spanish and five Italian. The questionnaire was translated into Spanish and Italian by the authors. The responses were collected between May 2020 and June 2020. The questionnaire scored a Cronbach's $\alpha = .939$. This value, which exceeds the .7 minimum specified by Copra *et al.* (2021), indicated a high internal consistency. Once validated, we statistically analyzed the data using a descriptive test and the Mann–Whitney U correlational test.

### 3.3. *Participants*

Responses were collected through a purposeful sample, which consists of selecting groups or individuals that provide significant and useful information to provide a comprehensive view of a phenomenon (Shaheen, Pradhan & Ranajee 2019), and a snowball sampling technique, which provided a small group of selected individuals to share the questionnaire with other individuals with similar characteristics (Etikan, Alkassim & Abubakar, 2015). These were completed by the authors in Spain and Italy between July 2020 and July 2021 using the self-administered MuPQ. The final sample comprised of 698 random participants, 358 Spanish and 340 Italian (see Annex, Table 1).

The sample was mainly characterized by Spaniards and Italians (1) over 20 years old, (2) especially women, although there is an equal average between both genders, (3) from higher education, (4) students of public schools who use mainly (5) YouTube, Instagram, TikTok and Facebook, among others such as Tumblr or Twitch, (6) who use social media every day between one or two hours, and (7) who listen to music between one and two hours per day.

## 4. Results

### 4.1. *Musical Preferences in Spain and Italy*

First, we analyzed the musical preferences of the Spanish and Italian participants. Regarding the item 11, which referred to musical knowledge, we found (a) $M_{Spain} = 1.86$, $M_{Italy} = 1.75$, and $SD_{Spain} = 1.22$, $SD_{Italy} = 1.18 - 11.1$ "I play one or more musical instruments;" (b) $M_{Spain} = 2.68$, $M_{Italy} = 1.91$, and $SD_{Spain} = 1.42$, and $SD_{Italy} = 1.188 - 11.2$ "I do not play any musical instrument;" (c) $M_{Spain} = 1.87$, $M_{Italy} = 1.87$, and $SD_{Spain} = 1.15$, $SD_{Italy} = 1.06 - 11.3$ "I knew how to play an instrument, but I don't practice anymore;" (d) and $M_{Spain} = 2.47$, $M_{Italy} = 2.47$, and $SD_{Spain} = 1.23$, $SD_{Italy} = 1.20 - $ "I cannot play an instrument, but I would like to learn." This means that both Spanish and

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Italians could not play an instrument, but they would like it, with a statistical significance dispersed among the values. Regarding item 12 on the role of music in the life of the participants, we found that (a) $M_{Spain} = 3.46$, $M_{Italy} = 3.14$, and $SD_{Spain} = .75$, $SD_{Italy} = 1.04$ −12.1 − "Music is a vital part of my life;" (b) $M_{Spain} = 2.63$, $M_{Italy} = 3.10$, and $SD_{Spain} = 1.19$, $SD_{Italy} = .87$ − "Music is quite important in my life;" (c) and $M_{Spain} = 1.42$, $M_{Italy} = 1.36$, and $SD_{Spain} = .81$, $SD_{Italy} = .683$ − "I could live without music." The data showed that music is a very important part of the lives of both Spanish and Italians. In the item 13 about preferred musical style, we found the results shown in Table 2.

**Table 2.** Preferred musical style analysis.

| Variables | Mean Rank (Spain) | SD (Spain) | Mean Rank (Italy) | SD (Italy) |
|---|---|---|---|---|
| Pop | 3.19 | .91 | 2.88 | 1.07 |
| Rock | 2.87 | 1.12 | 1.94 | 1.14 |
| Hip Hop | 1.95 | 1.05 | 2.22 | 1.02 |
| Latin | 2.46 | 1.12 | 2.39 | 1.15 |
| Soul/Funk | 2.17 | 1.1 | 1.8 | .98 |
| Hard Rock | 1.72 | .97 | 1.39 | .82 |
| Electronic music | 1.87 | .99 | 1.60 | .91 |
| New age | 1.54 | .80 | 1.29 | .71 |
| Folk music | 1.8 | .95 | 1.49 | .80 |
| Classical music | 2.19 | 1.01 | 1.67 | .97 |
| Jazz/Blues | 2.26 | 1.1 | 1.5 | .75 |
| Other | 2.28 | 1.14 | 1.34 | .75 |

Source: Own elaboration.

In this case, we identified that the preferred musical style in Spain was Pop, Rock and Latin music with dispersed statistical values, and the preferred musical style in Italy was Pop, Latin music and Hip Hop. In both countries, the least listened style was New Age, with music genres such as Ethereal Gothic, Celtic rhythm, among others. Regarding the item 14 about the moment when participants listened to music, we found the results collected in Table 3 (see Annex, Table 3).

In the case of Spain, participants used to listen to music while driving a vehicle, relaxing, and doing sports at the gym. In the Italian case, they preferred listening to music when driving, relaxing and watching TV content such as movies and series, among others. In contrast, in Spain they rarely listened to music while sleeping or reading, and in Italy while sleeping or doing housework.

Concerning item 15 on the musical preference of Spanish and Italian people, we found that $M_{Spain} = 3.03$, $M_{Italy} = 2.96$, and $SD_{Spain} = .96$, $SD_{Italy} = .93$ in "I show specific preferences for certain types of music;" $M_{Spain} = 2.89$, $M_{Italy} = 2.66$, and $SD_{Spain} = .99$, $SD_{Italy} = 1.29$ in "I like particular styles of music;" and $M_{Spain} = 3.06$, $M_{Italy} = 2.67$, and $SD_{Spain} = 1.17$, $SD_{Italy} = 1.22$ in "I dislike certain sytles of music." Spanish participants preferred some musical styles within a high statistical significance and minimal dispersion. Similarly, Italians also preferred some kinds of musical styles, although not significantly. In other words, their musical styles were not defined by liking or disliking (see Annex, Table 4).

Finally, in item 16 about the places where they listened to music, we found that $M_{Spain} = 3.14$, $M_{Italy} = 3.08$, and $SD_{Spain} = 1.06$, $SD = 1.1$ in "Concerts;" $M_{Spain} = 3.37$, $M_{Italy} = 2.67$, and $SD_{Spain} = .91$, $SD_{Italy} = 1.24$ in "Party;" $M_{Spain} = 3.01$, $M_{Italy} = 3.42$, and $SD_{Spain} = 1.18$, $SD_{Italy} = .74$ in "Disco/Club;" $M_{Spain} = 3.72$, $M_{Italy} = 2.57$, and $SD_{Spain} = .58$, $SD_{Italy} = 1$ in "When I'm alone;" $M_{Spain} = 3.12$, $M_{Italy} = 1.7$, and $SD_{Spain} = .9$, $SD_{Italy} = .83$ in "When I'm with friends;" and $M_{Spain} = 2.32$, $M_{Italy} = 3.76$, and $SD_{Spain} = 1.09$, $SD_{Italy} = .51$ in "When I'm with family." Spanish participants listened to music preferably when they were alone, with significant and minimally dispersed statistical values. Also, Italians listened to music preferably at discos, clubs or concerts, with statistically significant and minimally dispersed values (see Annex, Table 7).

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### 4.2. *Listening, creating and sharing music on YouTube and TikTok*

In terms of listening to, creating and sharing music practices on YouTube and TikTok platforms, we analyzed the items referring to the music use of these platforms among Spanish and Italian users. With regard to platforms that include music or audio in their content –item 18– we found that, in Spain, the platforms for music use were in order of preference (1) YouTube, (2) Spotify, (3) TikTok, and (4) others. This was translated in terms of $M_{Spain}$ = 3.74, $M_{Italy}$ = 2.57, and $SD_{Spain}$ = .53, $SD_{Italy}$ = 1.16 in "I know the YouTube platform and its features;" $M_{Spain}$ = 2.06, $M_{Italy}$ = 3.19, and $SD_{Spain}$ = 1.17, $SD_{Italy}$ = 1.07 in "I know the TikTok platform and its features;" $M_{Spain}$ = 3.45, $M_{Italy}$ = 2.02, and $SD_{Spain}$ = .88, $SD_{Italy}$ = 1.15 in "I know the Spotify platform and its features;" $M_{Spain}$ = 1.85, $M_{Italy}$ = 1.24, and $SD_{Spain}$ = 1.13, $SD_{Italy}$ = .64 in "I know the Apple Music platform and its features;" $M_{Spain}$ = 1.37, $M_{Italy}$ = 2.12, and $SD_{Spain}$ = .79, $SD_{Italy}$ = 1.04 in "I know the Last.fm platform and its features;" $M_{Spain}$ = 2.06, $M_{Italy}$ = 3, and $SD_{Spain}$ = 1.07, $SD_{Italy}$ = 1.08 in "I know another platform and its functionalities to listen, create or share music." In Italy, (1) TikTok, (2) others, and (3) YouTube (see Annex, Table 8).

In item 19 related to listening to, creating or sharing music on digital platforms, we found that $M_{Spain}$ = 3.32, $M_{Italy}$ = 2.02, and $SD_{Spain}$ = .94, $SD_{Italy}$ = 1.19 in "I often use YouTube such a social platform to listen, créate or share music;" $M_{Spain}$ = 1.44, $M_{Italy}$ = 2.7, and $SD_{Spain}$ = .92, $SD_{Italy}$ = 1.22 in "I often use TikTok such a social platform to listen, create or share music;" and $M_{Spain}$ = 2.92, $M_{Italy}$ = 2.81, and $SD_{Spain}$ = 1.26, $SD_{Italy}$ = 1.16 in "I use another social platform to listen, create or share music." Spanish people mainly used YouTube for musical purposes, followed by other platforms and TikTok, and Italians used other platforms, followed by TikTok and YouTube (see Annex, Table 9).

In the case of YouTube use –item 20– we found that $M_{Spain}$ = 3.18, $M_{Italy}$ = 1.85, and $SD_{Spain}$ = 1.01, $SD_{Italy}$ = 1.07 in "I listen to random music online on YouTube;" $M_{Spain}$ = 2.15, $M_{Italy}$ = 1.74, and $SD_{Spain}$ = 1.29, $SD_{Italy}$ = 1 in "I create specific music lists on my personal YouTube account;" and $M_{Spain}$ = 2.01, $M_{Italy}$ = 1.33, and $SD_{Spain}$ = 1.22, $SD_{Italy}$ = .79 in "I download music videos from YouTube to watch/listen to them from another device." Spanish people used it to listen to random music without making playlists or downloading, with a minimally dispersed statistical significance. Accordingly, but in a statistically less significant and dispersed way, Italians also used YouTube to listen to random music (see Annex, Table 10).

On the other hand, in item 21 about creating and sharing music through YouTube (see Annex, Table 11), we noted that creating and sharing music was not particularly relevant for Spanish users, although sharing music from YouTube on other platforms was mainly highlighted with a dispersed statistical significance. Again, Italians showed a low interest in creating music on YouTube. Some of the highlighted data were $M_{Spain}$ = 1.28, $M_{Italy}$ = 1.28, and $SD_{Spain}$ = .75, $SD_{Italy}$ = .73 in "I adapt pre-existing songs to create and share my own covers on YouTube;" $M_{Spain}$ = 1.24, $M_{Italy}$ = 1.78, and $SD_{Spain}$ = .67, $SD_{Italy}$ = 1.14 in "I create and share my own songs on YouTube;" $M_{Spain}$ = 2.20, $M_{Italy}$ = 1.47, and $SD_{Spain}$ = 1.21, $SD_{Italy}$ = 1.47 in "I share YouTube music compositions on other social media." Regarding item 22, related to the use of TikTok (see Annex, Table 12), we found that $M_{Spain}$ = 1.16, $M_{Italy}$ = 1.76, and $SD_{Spain}$ = .54, $SD_{Italy}$ = 1.12 in "I add music pieces to my TikTok account to create content;" $M_{Spain}$ = 1.4, $M_{Italy}$ = 1.58, and $SD_{Spain}$ = .91, $SD_{Italy}$ = .94 in "I use music pieces from other TikTok users to create content;" $M_{Spain}$ = 1.28, $M_{Italy}$ = 1.29, and $SD_{Spain}$ = .78, $SD_{Italy}$ = .68 in "I create and share new musical compositions on TikTok;" and $M_{Spain}$ = 1.32, $M_{Italy}$ = 1.98, and $SD_{Spain}$ = .86, $SD_{Italy}$ = 1.21 in "I participate in challenges of commutinies or brands." In this case, Spanish prosumers preferred to use other users' audios to create their own music content with a minimally dispersed statistical significance, and Italian users favored participating in challenges created by other users or brands with a high statistical dispersion among the data.

To conclude the statistical analysis, we evaluated the appropriate use of content on YouTube and TikTok –item 23. We found that $M_{Spain}$ = 1.87, $M_{Italy}$ = 2.06, and $SD_{Spain}$ = 1.1, $SD_{Italy}$

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= 1.14 in "When I create or share music on YouTube and/or TikTok I take into account the copyright of music;" $M_{Spain}$ = 1.92, $M_{Italy}$ = 1.61, and $SD_{Spain}$ = 1.04, $SD_{Italy}$ = 1.61 in "I know the copyright terms of the YouTube and/or TikTok platform in reference to music;" $M_{Spain}$ = 1.33, $M_{Italy}$ = 1.66, and $SD_{Spain}$ = .72, $SD_{Italy}$ = 1.14 in "I have ever asked for permission to share videos/music pieces on YouTube and/or TikTok;" and $M_{Spain}$ = 1.29, $M_{Italy}$ = 2.79, and $SD_{Spain}$ = .72, $SD_{Italy}$ = 1 in "My YouTube and/or TikTok shared content has sometime been restricted for copyright infringement on the platform." In both countries, users did not highlight their concern about the appropriate use of music on the platforms (see Annex, Table 12). In Spain, users' awareness of YouTube and TikTok copyright was minimally significant, and in Italy, users' content was sometimes restricted for infringing the platform's copyright.

### 4.3. *Music prosumer differences between Spain and Italy*

Once we analyzed prosumer practices in relation to music, we proceeded to determine the differences between the Spanish and Italian communities. To do so, we employed the Kolmogorov-Smirnova standard test (as $n \geq 50$). We identified that since this was a significant ordinal sample ($K$–$S(698)$ = .332, $p$ = .001), we should use the nonparametric Mann-Whitney U test.

### 4.4. *The role of music as digital lifestyle*

In order to understand the differences between the musical preferences of Spanish and Italian individuals, we examined Table 10. Taking into account the musical preference variables as dependent variables, and the Spanish-Italian sample as independent, we identified a significant statistical difference in 'Musical style' with a high statistical and a medium effect size. This showed that the role of music in both Spain and Italy did not differ overall, emphasizing highly similar knowledge, role, preferences, and interests in the way they consume music.

**Table 10**. Differences between musical preferences in Spain and Italy.

| Variables | Spain n = 358 Mean Rank | Italy n = 340 Mean Rank | Z | U | p | 1- β | d |
|---|---|---|---|---|---|---|---|
| Musical knowledge | 358.11 | 340.44 | -3.214 | 52971.5 | .162 | .81 | .14 |
| Role of music in their life | 345.32 | 353.90 | -3.118 | 53159.0 | .275 | .32 | .03 |
| Musical style | **385.64** | **311.45** | -6.008 | 46308.5 | .032 | .99 | .49** |
| Preferred moments to listen to music | 369.45 | 328.50 | -7.132 | 43267.2 | .102 | .94 | .24 |
| Musical interests | 367.08 | 330.99 | -2.499 | 54565.3 | .099 | .83 | .19 |
| Preferred places to listen to music | 374.01 | 323.69 | -10.236 | 35306.5 | .084 | .95 | .25 |

*High probability. **Medium probability.

Source: Own elaboration.

### 4.5. *Using YouTube and TikTok for music purposes*

Regarding the use of YouTube and TikTok as platforms for the use, creation and sharing of musical content, we analyzed the results of Table 11. We found significant differences between the two samples in the variables (a) 'Devices for listening to music'; (b) 'Platforms for listening to music'; (c) 'Listening to, creating and sharing music via YouTube/TikTok'; (d) 'Musical use of YouTube'; (e) 'Musical use of TikTok'; and (f) 'Using music content on social media.' Particularly significant were the size effect and statistical power of the sample related to the YouTube music use (1- $\beta$ = 1, $d$ = .75 with high probability), and in the appropriate use of musical content on social media (1- $\beta$ = .99, $d$ = .41 with medium probability). Consequently, the use of digital platforms for music prosumer diverged significantly between Spain and Italy.

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**Table 11**. Differences between the use of digital platforms in Spain and Italy.

| Variables | Spain n=358 Mean Rank | Italy n=340 Mean Rank | Z | U | p | 1- β | d |
|---|---|---|---|---|---|---|---|
| Devices for listening to music | **363.57** | **334.68** | -12.088 | 30691.2 | .001 | .22 | .19 |
| Platforms for listening to music (YouTube, TikTok, Spotify, etc.) | **352.37** | **346.48** | -11.781 | 32008.1 | .001 | .004 | .05 |
| Listening to, creating and sharing music via YouTube/TikTok | **354.83** | **343.88** | -9.779 | 36512.6 | .013 | .03 | .04 |
| Musical use of YouTube | **409.40** | **286.43** | -8.836 | 39416.6 | .001 | 1 | .75* |
| Create/share music content on YouTube | 355.47 | 343.21 | -5.476 | 48770.3 | .220 | .43 | .07 |
| Musical use of TikTok | **316.35** | **384.41** | -5.850 | 48992.0 | .022 | .91 | .27 |
| Using music content on social media | **319.06** | **381.55** | -7.191 | 43558.5 | .004 | .99 | .41** |

*High probability. **Medium probability.

Source: Own elaboration.

### 4.6. *Engaging with online music*

Finally, we reviewed Table 12 for understanding musical engagement. Out of eight variables, only three presented significant differences: (a) 'Musical self-perception', (b) 'Music recommendation filtering on social media', and (c) 'Storytelling music creation/sharing on YouTube/TikTok.' The difference in the creation/sharing of music storytelling across the platforms was the most prominent variable (1- $\beta$ = 1, $d$ = .88 with high probability). Thus, interaction with music content through these platforms was similar between users in Spain and Italy.

**Table 12**. Differences between musical engagement in Spain and Italy.

| Variables | Spain n=358 Mean Rank | Italy n=340 Mean Rank | Z | U | p | 1- β | d |
|---|---|---|---|---|---|---|---|
| Musical self-perception | **336.05** | **363.66** | -6.162 | 45940.8 | .036 | .69 | .19 |
| Music recommendation filtering on social media | **345.65** | **353.55** | -4.502 | 50093.5 | .001 | .001 | .00 |
| Music sharing interaction on social media | 350.36 | 348.60 | -7.837 | 42548.0 | .127 | .41 | .09 |
| Mood regarding YouTube/TikTok | 334.23 | 365.57 | -7.324 | 43963.0 | .191 | .90 | .20 |
| Motivations for using YouTube/TikTok | 325.09 | 375.20 | -3.996 | 52139.2 | .075 | .93 | .24 |
| Storytelling music creation/sharing on YouTube/TikTok | **289.72** | **412.45** | -8.740 | 40156.3 | .025 | 1 | .88* |
| Feelings about the music | 371.68 | 326.14 | -4.324 | 50137.4 | .136 | .98 | .27 |
| Feelings about the music they listen to on YouTube/TikTok | 340.50 | 358.98 | -3.684 | 51473.0 | .053 | .34 | .11 |

*High probability. **Medium probability.

Source: Own elaboration.

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## 5. Discussion and conclusion

This study explored the musical convergence on YouTube and TikTok. Our findings showed that users were significantly interested in using social media for musical purposes. In this sense, the analysis contributes to the understanding of music prosumption processes through consolidated platforms such as YouTube, and popular platforms such as TikTok.

First, music remains an important part of the entertainment industry and people's lives. Its evolution has been supported over the years by devices, venues, and today by social media and streaming platforms. In the cases analyzed, we found that music played a major role in Spain and Italy, inspiring both cultures through extended and short-form videos (Naveed *et al.*, 2017). Indeed, much of the sample reported their ability to play musical instruments either currently or in the past. As we discussed previously, social media reflect the interest of the prosumer society through successful proposals that focus on their interests, such as music and video: YouTube and TikTok.

In these platforms we found an appropriate environment for music creation, sharing and participation, among other platforms such as Spotify or Twitch. However, unlike content creators or influencers –such as YouTubers, who prioritize the creation and remixing of content (Vizcaíno-Verdú *et al.*, 2021b)– this study showed that users employed these sites to listen to music or to participate in trends or challenges. We found this in the way users engage with music across platforms, where the average highlighted for both countries was music self-perception, music recommendation filtering, and music storytelling creation/sharing. In other words, they are a sort of proactive prosumer or "music curator" who relies on participation rather than creation. The 'peak music experiences' discussed by Green (2016) highlighted no intention of becoming influencers among the community of amateur users, creating what Bennet and Rogers (2016) called collective cultural memory to connect communities with heterogeneous musical tastes. Effectively, among Pop, Rock, Latin music and Hip-Hop as preferred musical styles in the study, we noted that there was not a significant prevalence for specific musical genres. That is, although these musical styles were highlighted, we did not find a culture of musical liking or disliking. This indicated that prosumers on social media were heterogeneous, sharing collaborative interests.

In both countries, as Bennet and Strong (2018) claimed, our study shows that there are no musical barriers due to YouTube and TikTok among other platforms (Fraser *et al.*, 2021). Thus, we did not find major differences in the three main dimensions of the study between Spain and Italy. Although differences were mainly related to the use of digital platforms, we found that both preferences and musical engagement in the prosumer culture were similar. Accordingly, we may approach a trend between the current music-prosumer based on the evolution and globalization of social media (Airoldi, 2021), and the process of platformization (van Dijck *et al.*, 2018; Smith & Secoy, 2019).

Lastly, the MuPQ contributed significantly to these findings. The understanding of musical phenomena in social media, despite the increasing concern of academia, continues producing constant updates adapted to users' behaviors. We already mentioned that the historical evolution of music was fast and ongoing, bringing in milestones associated with technological progress (Prey *et al.*, 2020). Nevertheless, on YouTube or TikTok we are no longer talking about technological progress *per se*. Namely, improvements in the mobile device from which users access these platforms do not change the way they experience music every day. In this case we are focusing on digital data that moves through the Internet, which in some sense redefines this "musical visualization." For this reason, the MuPQ, compared to previous questionnaires, has proved truly thought-provoking to understand how music evolves according to the relationship between users and social media.

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### 5.1. *Musical convergence in Western countries*

As regards the research questions concerned with (RQ1) the musical preferences of Spanish and Italian people, and (RQ2) whether they listen to, create and share music through YouTube and TikTok, we discussed the following aspects. First, we found that both in Spain and in Italy the participants declared that they did not know how to play music instruments. However, they showed interest in learning to play any of them. This idea is supported by a further finding in which they pointed out that music was very important in their lives. In other words, prosumers in both countries were not musicians, but considered that they could not live without music. Such an approach is aligned with how they engage with music, for which they seem to play the role of a content curator (Dalu-Maharso, 2021). We understand this profile such as a "music curator," who select, research and share music that may add value on YouTube and TikTok.

Although on YouTube videos are usually recorded and edited outside the platform to share it with other users among a multitude of storytelling options (Vizcaíno-Verdú *et al.*, 2021a), on TikTok a further development occurred. On this platform a user without musical skills, e.g., playing an instrument or singing, can employ someone else's audio to create their own content. That is, first YouTube with its wide collection of cover and mashup sharing facilities (Green & Burgess, 2009), and then TikTok with its music and video editing features (Vázquez-Herrero *et al.*, 2020), empowered users to create and share musical content that was previously limited to recording studios and music conservatories.

Subsequently, the study has allowed us to understand that in these performances of musical entertainment, sharing has become the main interaction between Spanish and Italian prosumers. Although these platforms allow content creation, it seems that sharing a music video they liked with other users was their main interest. It is particularly interesting to note that on both of these platforms which ground their systems in video recommendation algorithms (Airoldi *et al.*, 2015; Bhandari & Bimo, 2020), users preferred to listen to/watch music randomly. In other words, users favored being recommended videos by YouTube and TikTok, rather than employing the extensive features to create favorite playlists and follow specific singers or music groups, among others. Accordingly, we are approaching a trend in which algorithms guide the musical interests of prosumers, satisfying their needs to listen to, create and share music videos. These practices have not been significantly different between both countries in terms of (RQ3) music preferences or (RQ5) engagement with platforms. It was only in (RQ4) the use of social media that we found major disagreements between Spain and Italy, with dispersed values that showed a globalized interest in music prosumption.

### 5.2. *Limitations and future research*

This study had limitations inherent to its context. First, although the sample was both representative and equal, it was focused on a particular region: Spain and Italy. In this European setting, Latin culture predominates and this was reflected in our findings with minimal significant differences –especially in preferences and engagement. Although the aim was to understand the convergence between music and prosumer through revolutionary platforms for the music industry such as YouTube and TikTok, we developed and validated an updated questionnaire adapted to the platformization society with a musical perspective, which allowed us to understand how users interact today with visual music. This contextual handicap, however, allowed us to understand that users today preferentially "see the music," becoming a sort of "music curators" capable of creating trends and cross-cultural storytelling through a single musical language. The study introduces the MuPQ questionnaire, whose customization and use could be extended interculturally and internationally throughout regions to understand prosumer practices concerning music on YouTube, TikTok and future platforms.

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## Annex

The complete questionnaire is available in the Figshare data repository with the following doi:
https://www.doi.org/10.6084/m9.figshare.14816586.v3

Table 1 is available in the Figshare data repository with the following doi:
https://www.doi.org/10.6084/m9.figshare.16556214.v1

Table 3 is available in the Figshare data repository with the following doi:
https://www.doi.org/10.6084/m9.figshare.21559101.v1

Table 4 is available in the Figshare data repository with the following doi:
https://www.doi.org/10.6084/m9.figshare.18274049.v1

Table 7 is available in the Figshare data repository with the following doi:
https://www.doi.org/10.6084/m9.figshare.18274049.v1

Table 8 is available in the Figshare data repository with the following doi:
https://www.doi.org/10.6084/m9.figshare.18274049.v1

Table 9 is available in the Figshare data repository with the following doi:
https://www.doi.org/10.6084/m9.figshare.18274049.v1

Table 10 is available in the Figshare data repository with the following doi:
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Table 11 is available in the Figshare data repository with the following doi:
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Table 12 is available in the Figshare data repository with the following doi:
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