

# Video streaming, how social video platforms condition users' behavior and expressive uses of their apps

Streaming de vídeo, cómo las plataformas de vídeo social condicionan el comportamiento y los usos expresivos de los usuarios de sus apps

**Antonio Castro Higuera**

Universidad de Málaga. España

[acastro@uma.es](mailto:acastro@uma.es)

[CV]    

**José Patricio Pérez-Rufi.**

Universidad de Málaga. España

[patricioperez@uma.es](mailto:patricioperez@uma.es)

[CV]      

**José Luis Torres Martín**

Universidad de Málaga. España

[jltorres@uma.es](mailto:jltorres@uma.es)

[CV]   

**Mireya Rocío Carballada Camacho.**

Universidad de Málaga. España

[mcarballada@uma.es](mailto:mcarballada@uma.es)

[CV]  

**Miguel de Aguilera Moyano.**

Universidad de Málaga. España

[deaguilera@uma.es](mailto:deaguilera@uma.es)

[CV]     

*This research is part of the research project “Apps for the production of live audiovisual texts: functional characteristics and interfaces analysis”), financed by the I Plan for Scientific Research, Transfer, and Dissemination of the Universidad de Málaga*

## How to cite this article / Normalized reference

Castro-Higuera, A., Pérez-Rufi, J.P., Torres-Martín, J.L., Carballada-Camacho, M. y De Aguilera-Moyano, M. (2022). Streaming de vídeo, cómo las plataformas condicionan el comportamiento y los usos expresivos de los usuarios de sus apps. *Revista Latina de Comunicación Social*, 80, 1-20. <https://www.doi.org/10.4185/RLCS-2022-1545>

## RESUMEN

**Introducción:** La interfaz es un nodo donde convergen elementos culturales, sociales y tecnológicos. Este trabajo parte de la hipótesis de que las plataformas de vídeo social condicionan los comportamientos y usos de los usuarios a través de su diseño. Los usuarios retroalimentan estas plataformas apropiándose de ellas a través de sus usos. Esta investigación se centra en el análisis de las funcionalidades de las aplicaciones de *streaming* y los patrones de comportamiento predefinidos por los desarrolladores de las aplicaciones. **Metodología:** El principal objetivo de esta investigación es conocer los patrones

de comportamiento comunicacional predefinidos por los creadores de aplicaciones de transmisión en vídeo integradas en las siguientes redes sociales: Facebook, YouTube, Instagram, TikTok, Twitch y Twitter. El segundo objetivo es establecer una tipología de funciones que aparecen en las plataformas analizadas, que se pueden extrapolar al resto de apps de *streaming*. Utilizamos el método de recorrido cognitivo o *walkthrough method* para lograr los objetivos previamente definidos. **Resultados:** Después de examinar las plataformas operacionalizamos las diferentes tareas y funcionalidades de las aplicaciones, agrupándose en tres categorías: funciones operacionales, funciones discursivas y funcionalidades de interacción. **Conclusiones:** Concluimos que los creadores de interfaces de aplicaciones móviles para plataformas sociales no solo tienen en cuenta las preferencias de los usuarios, sino que también pretenden orientarlos hacia las funciones más interesantes desde un punto de vista comercial, como las funciones de vídeo en directo. En cuanto a la producción de textos audiovisuales, las funciones predeterminadas por las aplicaciones influirán en su estilo convirtiéndose en seña de identidad de la propia plataforma.

**PALABRAS CLAVE:** *streaming* de vídeo; *apps studies*; *walkthrough method*; economía política de la comunicación; plataformas; *social media*.

## ABSTRACT

**Introduction:** The interface is a node where cultural, social, and technological elements converge. This work is based on the hypothesis that social video platforms condition user behaviours and uses through their design. Users provide feedback to these platforms to these platforms by appropriating them, i.e., through their uses. This research focuses more specifically on the analysis of streaming app functionalities and the behavioural patterns predefined by the app developers. **Methodology:** The main objective of this research is to find out the behavioural patterns predefined by the creators of video streaming apps integrated on the following social networks: Facebook, YouTube, Instagram, TikTok, Twitch y Twitter. The second objective is to establish a typology of functions that appear on the platforms analyzed, extrapolating them to the rest of the streaming apps. We use a walkthrough method to achieve the previously defined goals. **Results:** After examining the platforms, we operationalized different tasks and the applications' respective functionalities, it is possible to group them into three categories: operational functions, discursive functions and interaction features. **Conclusions:** We conclude that the creators of mobile application interfaces for social platforms do not only consider users' preferences but also intend to guide them towards the most interesting features from a commercial standpoint, such as live video features. Regarding audiovisual text production, the functions predetermined by the apps will influence their style and is a hallmark of the platform itself.

**KEYWORDS:** video streaming; apps studies; walkthrough method; political economy of communication; platforms; social media.

## CONTENIDO

1. Introducción. 2. Objetivos y Metodología. 3. Resultados. 4. Discusión y conclusiones. 5. Bibliografía 6. Currículum Vitae

## CONTENT

1. Introduction. 2. Objectives and Methodology. 3. Results. 4. Discussion and Conclusions. 5. Bibliography 6. Curriculum Vitae

Translation by **Paula González** (Universidad Católica Andrés Bello, Venezuela)

## 1. Introduction

Contemporary research on cultural creation practices refers to the study of the relationship between tools (technology) and discourse and, specifically, to attention to platforms and the platformization process of cultural production. This work wants to highlight the importance of the design of social video live-video apps and their interfaces, as tools integrated into the platforms, by establishing cultural patterns that predefine and condition the behaviors and expressive uses by users. Following the approaches of Scolari (2018), the interface is presented as a node where the cultural, the social, and the technological converge. In its most technological aspect, the app's interface is integrated into a larger context, that of the platforms, in turn intrinsically linked to its social and cultural dimension. This re-

search is based on the premise that the design of live social video apps forms a framework for action in the user's relationship with the platform and conditions their discourse to a certain extent.

As containers in which apps are integrated, platforms are digital infrastructures that put groups of different types of agents in contact and that offer tools that generate their own products, services, and markets (Srnicek, 2017), besides being able to influence the processes of content creation and circulation (Magaudda and Solaroli, 2021). Their contemporary role is such that it has sought concepts such as platform ecosystem (Tiwana, 2014), platform society (Van-Dijk et al., 2018), or "age of platforms" (Simon, 2011). At the same time, platform studies acquire a multidisciplinary character (Barns, 2019) and identify different frameworks for the study of platforms and their social, technical, and economic relationships (Nichols and LeBlanc, 2020).

The concept of platformization is introduced by Helmond (2015) to critically describe the growth of platforms as the dominant economic and infrastructural model of the social web that leads to the organization of cultural, labor, and citizen practices around the platforms (Nieborg and Poell, 2018; Poell et al., 2021). The platforms have placed the user as a fundamental agent at the base of their activity, shaping a technological, sociocultural, and commercial trend.

This work focuses on a precise aspect of platformization in its relationship with users: the production and distribution of social video and the behavior patterns predefined by the developers of live-video transmission apps, aimed at content-generating users, as well as feedback from the platforms based on user appropriations. Through the apps and the functions they allow, the producer users interact with other users, with the developers, and with the app markets, while articulating a discourse -conditioned in form and, to a lesser extent, in content by the functionality of the apps - and negotiate their roles within the platforms. Thus, the interface of these social video apps, as this work intends to demonstrate, conditions not only the activity of the content producer user but also their own expressive capacities.

This research, thus, takes as an object of study the apps oriented to the live production of social video, that is, those with content generated by users, leaving out of our analysis both the professionally produced video-on-demand (VoD) platforms and the apps used by these platforms or media outlets. The evaluation of user preferences for certain functionalities within social networks and platforms is also outside our objectives, as this work is limited to actions related to live-video streaming within the sample of analyzed apps and the consequences in its potential expressive uses.

Apablaza-Campos and Codina (2018, p. 162) understand social video transmission platforms as "a new kind of live-video broadcast that preferably uses social platforms, such as Facebook and Twitter, and that offers highly interactive features of interest for the media", last aspect that we can extend to all types of users. Regarding the activity of users, as the main agents of these social video platforms, the few studies on users who generate content on streaming platforms have defined them as streamers/performers/broadcasters or as audience/receivers (Gandolfini, 2016; Woodcock and Johnson, 2019; Li et al., 2020). The hierarchy of user roles has highlighted the verticality of creators and viewers typical of broadcast television, despite the interaction and feedback in real-time.

The creation of video content by producer users (streamers) has increased by facilitating production and distribution, as happened with the so-called Web 2.0, but also with the development of streaming technologies and video platforms (Törhönen et al., 2019), closely linked to the prosumer habits of the millennial generation (that is, those related to the production and consumption of cultural products). Live-video platforms (in their desktop versions and for apps on mobile devices) have grown in acceptance, becoming a contemporary phenomenon: as a paradigmatic case, Twitch increased, in 2020, by 83% the number of hours that users stayed on the platform (WARC, 2021). The development of live streaming heralds, according to Cunningham and Craig (2019), a new stage for social media entertainment (SME), where the proliferation of streaming platforms and streamers makes them potentially powerful agents of change.

Unlike the production of videos to be stored on platforms, the creation for live-video transmission is not independent of distribution and requires the intermediation of the platform for the production itself (Törhönen et al., 2019), and it is here where the design of interfaces and the integration of apps in the platforming process itself come into play, as we have previously pointed out. In this way, the app is

linked to the platform as it is based on its functionality through a set of interfaces with which to communicate, interact, and interoperate with the platform.

Tiwana (2014, pp. 5-6) defines apps as a complementary software subsystem or software service that connects to the platform to extend its functionality. Apps make up a multi-million-dollar market based on the different business models (Aguado, Martínez, and Cañete, 2015) adopted by the various members of the value chain organized around apps. The business volume of the apps market forecast for 2021 is 4,025 million dollars (Statista, 2021a), with a very high number of them in the main services where they are distributed and marketed: more than 3.1 million applications in Google Play, 2 million in the Apple App Store, 669,000 in the Windows Store, and 459,167 in the Amazon Appstore (Statista, 2021b).

Since the launch of the Apple App Store in 2008, few facets of life have been left out of the proliferation of apps (Nichols and LeBlanc, 2020), as part of a process that could be defined as appification. In this sense, the appification concept emphasizes the generalized transformative processes of musical or cultural practices that are increasingly extended to apps (Morris and Murray, 2018). Appification also refers to the processes in which apps and their user interfaces have an effect on our culture and our cognition by reorganizing our ways of acting and thinking in cultural aspects (Noë, 2015). Furthermore, the app ecosystem is also platformized (Nieborg and Helmond, 2019) as an integral part of the economic and infrastructural model that we said platforms represent.

It can, therefore, be established that the rise of apps and live-video transmission is closely related to the design of user interfaces and the functionalities allowed by apps for streamers, as one of the central concepts of HCI (Human-Computer Interaction). The user interface can be understood as the channel through which people communicate with devices and software: through the interface “the user provides interactive devices and systems with information and instructions that allow them to support their tasks” (Ruiz Gaona, 2019, p. 25).

In a very similar sense, Tiwana (2014, p. 7) considers the interfaces as “specifications” that describe how the platform and the apps interact and exchange information. The analysis of the interface implies one more concept: usability, defined by the ISO 25000 standard as the “capacity of the software product to be understood, learned, used, and attractive to the user, when used under certain conditions” (ISO, 2021). The HCI would promote “usability by incorporating innovative techniques or methodologies focused on the user” (Ruiz, Arciniegas, and Giraldo, 2018, p. 340).

Platforms intervene in user activities and shape the social dynamics that depend on them, besides participating in the uses and appropriations made by users (Gillespie, 2015). In this way, the platforms recognize user innovations and incorporate them into their new features and functionalities (Duguay, 2020). Thus, a dialogue is produced between the platform and users, in such a way that the platforms adapt their design and their functionalities to the uses and appropriations of the users and their demands. This interaction in the platform programming process is also adapted to the use of apps by users.

As a particular case, Leaver, Highfield, and Abidin (2020) discuss the influence of Instagram on the expressive capabilities of using the platform, highlighting how the options of the app’s interface condition the discourse and alter how users communicate. This statement can also be applied to social video streaming platforms: the design of the app’s interface not only conditions the user’s communication and structures their tasks and interaction (Gerlitz and Rieder, 2018) but also proposes formal guidelines and a discursive grammar.

We have, therefore, that live-video transmission platforms also establish a relationship, an interaction, with the user through the interface: each platform has its own form of interaction between the user and the device so that user interface design patterns facilitate the development of apps (Cortés-Camarillo et al, 2016). In its nature as a socio-technical artifact, the apps’ interface -through its design and the functionalities it offers- conditions, limits, or enhances the communicative and cultural practices of users, decisively influencing its uses and the configuration of the discourse of users, as this work seeks to demonstrate.

Referring to Facebook, Coromina, et al. (2018, p. 1004) point out that the platform “grammatizes the actions of the users and also the emotions that the narratives that unfold in this social network invoke.” The sense of “grammatization” of the platform refers to what Agre (1994) called “grammar of action”, as a metaphor to describe the channeling of communication, publication, and interaction with the software through methods that build actions. Gerlitz and Rieder (2018) argue that the grammar of actions implies that the interaction and possibilities for users are structured from sets of predefined options (providing “unitary actions”) integrated into the platform: the grammars, thus, acquire a certain normative force in the extent to which they delimit possible (and impossible) action horizons (Gerlitz and Rieder, 2018, p. 531).

We conclude that the platformization and appification of social video and live-video broadcasting have led prosumers, that is, consumers and content creators, to develop their discourse based on the functionalities that the software’s interfaces allow them, which also adapts to the uses and appropriations of the users. More precisely, this work is based on the hypothesis that platforms predefine and condition user uses and behaviors to a certain extent through their design, while users give feedback to such platforms through the appropriation they make of them, that is, through its uses. This research focuses, more specifically, on the descriptive analysis of the functionalities of the apps and the behavior patterns predefined by the programmers of such apps, oriented to the construction of a grammar of action in the production of live video by users. Closely linked to the commercial implications of interface design (Wang and Li, 2017; Boyd, Kannan, and Slotegraaf, 2019), we believe that streaming platforms enhance those functionalities that most interest them from a commercial and positioning point of view within the market. Quoting Gillespie (2010), the activity of the user on the platforms is controlled by corporate decisions oriented towards the profitability of their businesses. In an extremely competitive market, the motivations underlying the design of interfaces in apps and platforms may be more commercial than social or cultural (De-Aguilera-Moyano et al., 2019).

## 2. Objectives and Methodology

The main objective of the research is to describe the behavior patterns predefined by the creators of live-video apps integrated into the main social networks. As we have pointed out, the grammatization of actions in video streaming apps conditions the user’s discourse, so a first step to recognize this grammatization would be to identify and describe their functionalities and the behavior patterns they entail. A second objective that derives from the main one is to establish a typology of functions that appear on the analyzed platforms and that can be extrapolated to the rest of live-video transmission apps, once those functionalities have been identified and described.

To achieve the objectives defined above, we used an inspection method called a walkthrough method through which we analyze the functionalities of the apps and the tasks associated with them from a significant sample of streaming services made up of the main social networks based on the number of users. Subsequently, we recode and group the tasks and functionalities into categories with a common meaning. In this way, we extract a typology of functions from live-video apps that will determine the predefined behavior patterns in the analyzed apps.

The walkthrough method is a technique used mainly for usability evaluation (Wilson, 2014) that focuses on the ease of learning a product by users. This technique can be used in any of the phases of a product, although it is especially indicated for the design stage. For their part, Polson and Lewis (1990) point to exploration as to how users learn to use a product as opposed to other training processes.

There are many walkthrough methods. Wilson (2014) distinguishes up to 5 modalities of walkthrough methods. From the initial one called version 1, more suitable for cognitive psychology professionals that stood out for its complexity and difficulty of application, to the much simpler and easier informal walkthrough method to be used by other professionals outside the field of psychology. In the present study, we take this latest version as a methodological basis and adapt it to our research, leaving aside the aspects related to learning and limiting ourselves to describing the actions, tasks, and functionalities of the analyzed apps. From the exploration of the interfaces of live social video apps and their functionalities, a comparison will be made between them, to identify and categorize common patterns.

The sample selection criteria are partly quantitative, that is, we chose the three social networks with

the highest number of active users, which, according to the Digital 2021 report by We Are Social and Hootsuite (2021), are Facebook with 2,740 million active users, YouTube with 2,291 million active users, and Instagram with 1.221 million active users. To these, we add other platforms that, due to their emergence and specificities, we understand to be significant. This is the case of TikTok (689 million users), an emerging social network based “on the creation of short music video clips” (Torres-Martín; Villena-Alarcón, 2020, p. 260), Twitch (30 million daily users) (Twitch, 2021), a specialized streaming platform initially aimed at gaming but recently opened up to other genres such as the so-called talks with its IRL (in the real-life) line. Finally, we included Twitter in the sample for its informative nature and for its new streaming module that replaces the Periscope app. The selected platforms can be grouped into two types: those we call first-generation, which start from a position before the emergence and growth of live-video streaming by prosumers, later incorporating it into their functionalities -as is the case of Facebook, YouTube, Twitter, and Instagram- and the second generation, which emerge with the streaming service as an essential part of the platform -Twitch and TikTok-.

At an operational level, the practice of the walkthrough method requires the intervention of one or several hypothetical users or expert evaluators who approach the learning of the tasks from the actions necessary to complete them. These users -in this case, they coincide with the researchers themselves- carry out a systematic exploration in each of the apps that allow us to establish a list of functionalities that, once operationalized and categorized, will form a typology of functions of live-video apps.

### 3. Results

The first contribution that is extracted from the analysis carried out is the detailed description of each of the actions, tasks, and functionalities of the streaming modules of the selected apps, that is, we draw a functional scheme of the apps that make up the sample. On the other hand, following this map of functionalities, we obtain the behavior patterns that the apps propose to their users. Finally, we group and categorize the functionalities proposing a typology of functions.

#### 3.1. Facebook

The social network par excellence, which even today has the largest number of users worldwide, could not fail to host live-video functionality on its platform. In 2016, Facebook launched “Facebook Live”, a service consisting of live transmission by users of the social network who have a Facebook page.

Once the user decides to start a broadcast by consecutively pressing the “Live” and “Start live-video” icons, the app allows the target audience to be selected by choosing one of the options it makes available, such as the privacy mode (Public, Friends, Tagged people, Friends of tagged people, Friends, except..., and Groups you belong to) (see Figure 1). Likewise, it shows the contacts connected at the time of the live video, showing the profile image of each one of them, and it allows to tag third parties and even carry out solidarity collections for non-profit organizations with the “Raise money” function.

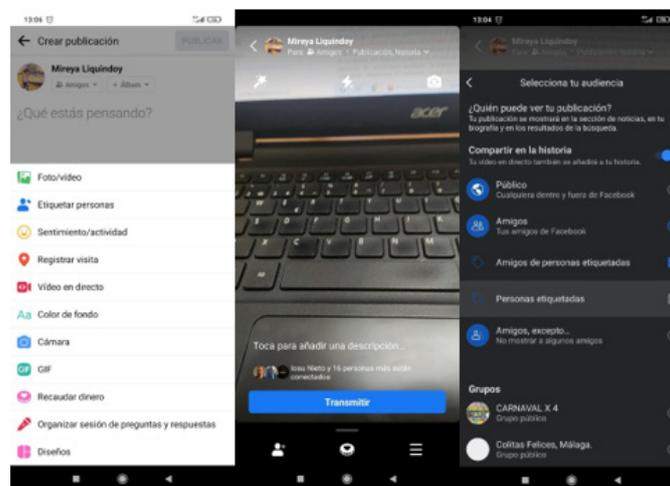


Figure 1: Facebook Menu  
Source: Facebook (mobile app)

Another notable functionality is the geolocation of the place from which the live video is made. But sticking to the purely audiovisual aspect, this app only allows recording in vertical format, either with the rear camera or with the front camera to capture a selfie-type image, the latter being the one that appears by default when opening the streaming service (see Table 1 that compares the different analyzed platforms regarding image format and camera type). Furthermore, it supports a whole series of filters to alter the color and lighting, as well as the activation of the mobile device's camera flash if the darkness of the scene requires it, or the insertion of emoticons through the "How are you feeling?" tool. These expressive functionalities enrich the visual content of the live video and can be activated before and during it.

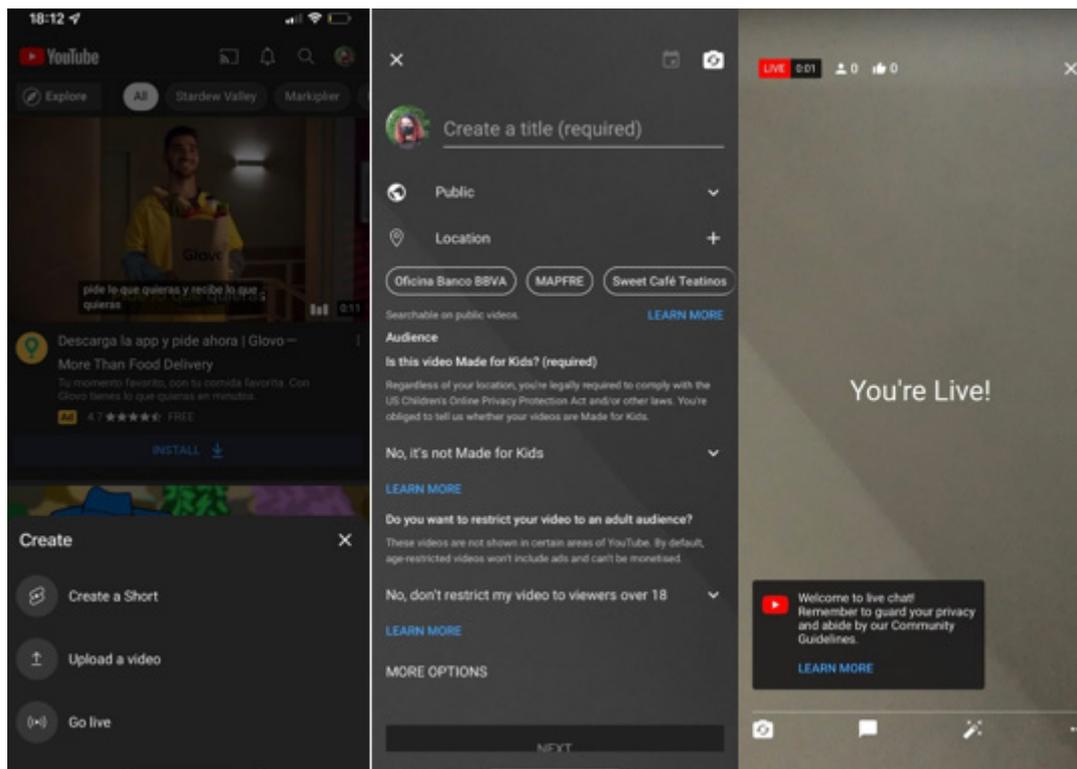
The "Other options" submenu leads to other functionalities that appear in the background when pressing the three points arranged vertically, for example, activating the transmission of only sound (without image) and the equalization of this audio with a waveform monitor or others of a functional type such as sending error reports. Another option offered by Facebook Live is the insertion of comments and descriptions of the video by crawling on a bar that appears at the bottom of the screen. At the end of the transmission, the user can carry out some final actions such as contact tagging or the default privacy modification at the beginning of the broadcast.

### **3.2. YouTube**

The most famous collaborative video platform on a global level was also one of the first to develop this functionality (in October 2009, a U2 concert was broadcast live, although it is in 2013 when the streaming service is generalized by users). However, it does not allow those users who have less than 1,000 subscribers to do lives from their mobile devices. This restriction accounts for the relevance that YouTube grants to its live-video tool and how it empowers those members of its community who carry out a professional activity (and who, therefore, report economic benefits to both parties).

At the operational level, access to the streaming module is direct; You just have to press the "+" icon and go to "Broadcast live". Once these actions have been carried out, the user must choose the form of emission based on its content. According to YouTube's help guide (Google, 2021), these can be done from a mobile device, ideal for narrating events that are happening simultaneously at the time of the broadcast, or for making vlogs, from the computer's webcam, or from a decoder that makes it possible to live broadcast video games, show overlays, and use external hardware, such as preamplifiers, microphones, and cameras (usually how events such as sporting events, concerts, performances, etc., are offered).

Regarding the object of study of this research, the live videos in mobile device apps, YouTube uses the vertical format for its transmissions, either with the rear camera, which appears by default or with the front one. It also provides many options regarding live customization: live chat, age restriction, monetization, etc. (see figure 2). To make the corresponding modifications, the user must go to "More options", to later go to "Show more" and press "Next". Likewise, you can choose to broadcast what appears on the screen of the mobile device, for which you will have to choose "Create channel" and then select the screen-sharing icon. This last option is commonly used by gamers for their live videos.



**Figure 2:** Youtube Menu  
**Source:** Youtube (mobile app)

One of the most recurrent utilities of YouTube live is the moderation of live chats. Before the broadcast, you can assign moderators, set parameters to block messages containing certain words, and hold live chat messages that may be inappropriate for review. This last functionality is reinforced with the slow mode in which the messages follow one another at a slower pace than the preset to make it easier to read. The activation or deactivation of live chat or its limitation to subscribers are other options that YouTube makes available to the user. Likewise, during the live video, messages and viewers can be moderated from the feed -that is, the content flow through which users can scroll- and hide or show a viewer from the live chat. Once the chat broadcast is over, the author will also be able to make some last modifications: play the chat, view or delete the chat history, and view the comments after the live broadcast. All these functionalities related to social interaction show the special concern of the platform for the management or curation of the content that viewers can incorporate into the live video.

Another aspect to highlight is the management of live videos. YouTube allows the programming of a live broadcast before its start; To do this, users, besides pressing “+” and “Broadcast live”, must go to “Calendar” and select the live broadcast. In the same way, they can delete past broadcasts by choosing the “Delete” button.

### 3.3. Instagram

The eminently visual social network, born in 2010 from the union of two key elements such as digital photography and smartphones, incorporates in 2016 the stories or videos of short duration and an ephemeral nature (they disappeared after 24 hours) that potentially could be uploaded directly to the platform. Later, other services were implemented, such as Instagram Direct or IGTV (2018), Instagram television that allows longer or direct videos to be broadcast without time limitation. Initially, IGTV is presented as an independent app, being in 2018 when it is fully integrated into the platform.

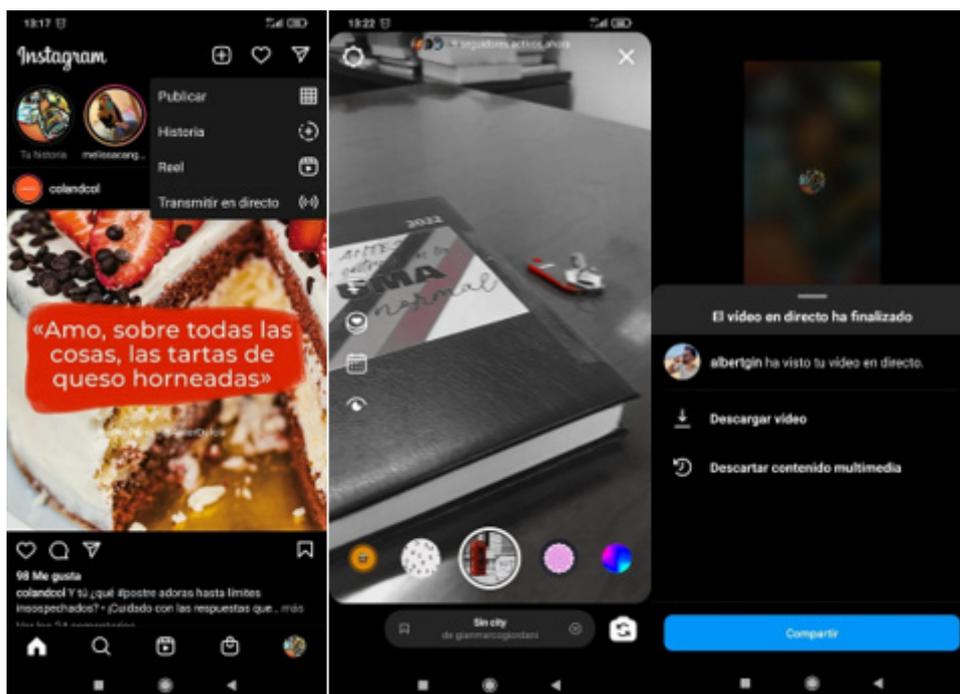
The importance that Instagram places on live broadcasts through its app is reflected in the number of clicks it takes for a user to start broadcasting. First of all, the first thing a user sees when entering the app are posts, making it necessary to click on the “+” icon to access the content creation submenu. But this action requires a later one to reach the live, needing two movements, which go through “reel”

and “story”, to reach the “live” submenu. It is clear that Instagram’s design puts content creation in the background and, even further, the live broadcast, favoring the viewing of posts over their creation.

Already in the specific module of the live transmission, the parameters that appear by default are striking, such as the front camera, something that prioritizes the selfie format. In the same way, the vertical format is the default and required in Instagram broadcasts. This feature of live broadcasts is made explicit in IGTV’s description that we find in the stores, “it is designed for the way you actually use your phone, so the videos are shown in full screen and vertical.” (PlayStore, 2018).

As in the rest of the platforms, the live-video transmission entails its immediate publication, in which a short text can be entered as a title. Other actions that Instagram proposes as optional, before and during the broadcast, are the application of the platform’s characteristic effects, among which we can distinguish those related to augmented reality such as particles and chroma, or lighting and textures. They also manage interactions with audiences such as turning off live visibility, user feedback through comments and replies, and sharing. With these features, the platform gives a high degree of control over the viewers and their activity regarding the live video.

As for the content that Instagram makes available to the user when performing the live video, the possibility of using photographs and videos from the internal memory or reel of the mobile device stands out. But not only does it allow pre-existing material to be included but it also incorporates the function of connecting with other users through the invitation to join the live video, which formally materializes in a split-screen or picture in picture in which the user who performs the streaming and the guest can interact via audio and video. Once the live show is over, the app allows you to manage the recording by sharing it on IGTV, downloading it, or deleting it permanently (see figure 3).



**Figure 3:** Instagram Menu  
**Source:** Instagram (mobile app)

In short, the design of the app favors more social behaviors, promoting interaction with other users/followers not only through unidirectional or bidirectional communication through instruments such as the chat but also in the production of content with direct invitations.

On the other hand, the platform emphasizes the role of the content creator or Instagrammer by placing it at the center of the transmission, proof of this is the promotion it makes of the selfie format with its interface design. A user to whom the platform makes available a series of resources especially aimed

at leisure and entertainment.

### 3.4. TikTok

As we have seen on other social platforms, TikTok establishes two restrictions when allowing its users to make live videos: being over 16 years old and having more than 1,000 followers. This “privilege” for those who have the potential to monetize or use this social network professionally gives an idea of the importance that TikTok attaches to its live-video tool.

Users of this app, born in 2018 after its merge with Musical.ly, have the possibility of starting a live video (always in vertical format) after pressing the “+” icon and going to the submenu provided for this purpose. Once there, you must crawl - lateral scrolling on the mobile device’s touch screen - to the left until the “Live” option appears, ignoring the different default durations that are suggested for video recordings (15 or 60 seconds) (see figure 4).

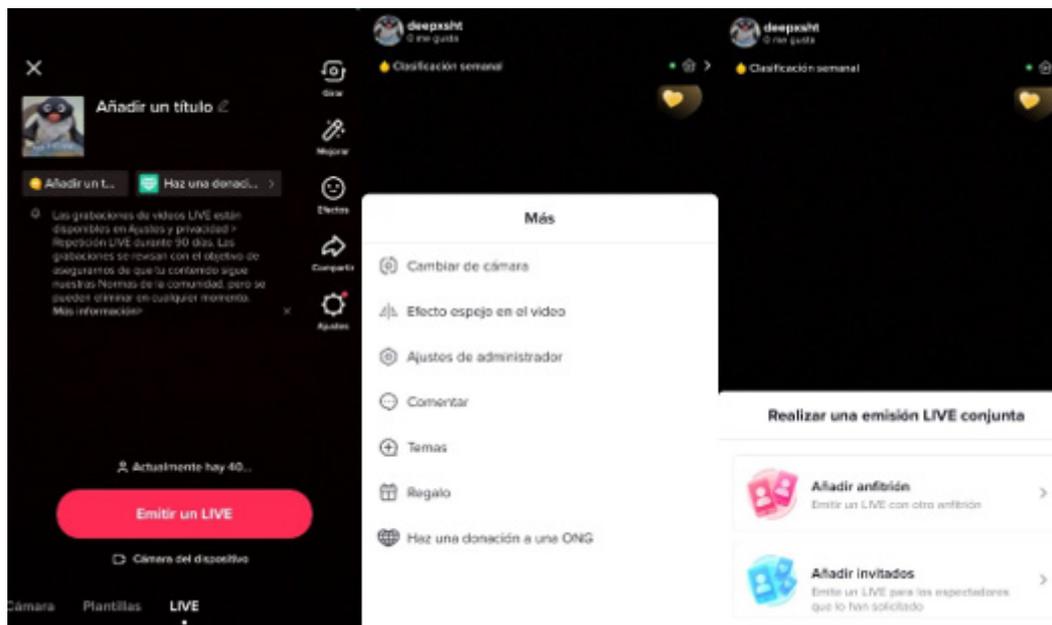


Figure 4: Tiktok Menu  
Source: Tiktok (mobile app)

Before the broadcast begins, the social network will make different text, video, and sound utilities available to its users. Its playful and dynamic character stands out both for the duration of its videos and for the effect filters, stickers, music, etc. that it offers the user when performing the live video. Regarding the insertion of the title with which the live video will be named, this can be done by clicking on the corresponding icon and entering the desired text. However, there will be many more possibilities that this app presents us regarding sound and video. By pressing the “🎵” icon, you can select the audio that will accompany the streaming from a wide range of effects and songs, precisely one of the distinctive features of TikTok.

Likewise, this platform presents a wide variety of options when it comes to modifying the image captured by the mobile device, which is necessarily vertical, from the simplest ones, such as switching the rear camera to the front camera, the first being the one that appears by default, to the potential to speed up video playback, going through a whole series of filters to alter its luminance and chrominance or the activation of the timer, if it is decided to interrupt the live-video after a time predetermined by the author has passed.

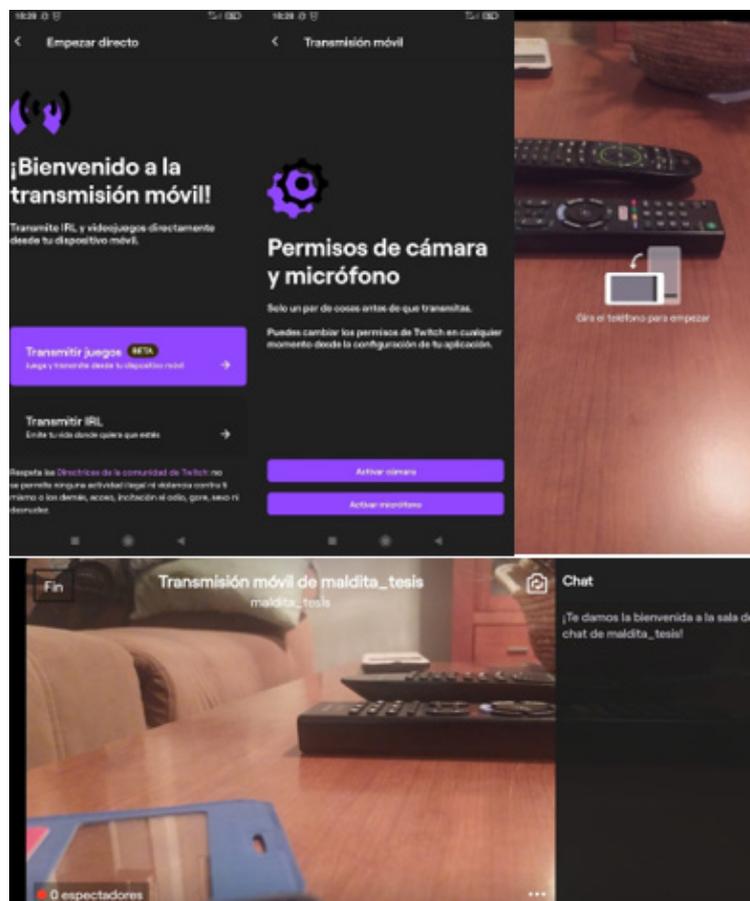
This set of actions included by the developers clearly shows which posts (mainly recreational) and audiences (mainly made up of young users) are the majority on TikTok and to whom its interface is geared.

When all these parameters have been established, you can start the live video just by pressing the red button, the same one with which you can start a conventional post.

### 3.5. Twitch

The live vocation of this platform is evident in the ease that the app presents to broadcast. The platform itself makes this vocation explicit in the description it makes in the Play Store where it emphasizes the ease of making a live broadcast “Mobile broadcast so you can broadcast live with the touch of a button” (Play Store, 2020).

Once the app is open, it is only necessary to click on the camera icon to access the live module. At this point, the platform offers two options to the user: stream games, in which the screen of the mobile device is shared with the microphone, or stream genres grouped in what is called in real-life (IRL) (See Figure 5). In both cases, a series of categories are displayed; for example, on IRL there are 14 that range from the classic thematic genres such as sports or health and well-being to other newer categories such as chatting or ASMR that aim to adapt the content of the platform to new trends. In the case of games, the categories are 25 and coincide with popular video games such as *Call of Duty* or *Clash of Clans*.



**Figure 5:** Twitch Menu  
Source: Twitch (mobile app)

At the operational level in the IRL configuration, and unlike Instagram, the camera that appears by default is the rear one, having to switch the camera through the corresponding button to adopt the selfie format in the transmission. On the other hand, the horizontal format is mandatory on Twitch to the detriment of other formats such as vertical or square.

The live mobile device interface has a simple design, allowing the screen to be decluttered with comments and other contextual information. To do this, it groups various features such as enabling/dis-

bling chat, sharing transmission, enabling/disabling microphone, or lock screen in the three-point button. These characteristic features denote the importance that the platform gives to the images transmitted live, eliminating possible distracting elements and limiting the screen of the mobile device to a simple camera viewfinder.

As for interaction with other users, the options it offers are relatively few, limited to the distribution of a message through the usual services of the mobile device (SMS, chat services, social networks, etc.). On the other hand, the management options for the video generated in the broadcast are similar to the rest of the platforms. Besides being stored in the channel as a video post, it offers the option of deleting and sharing, with the latter in the form of the so-called whisper or private message.

Twitch proposes very visual streaming, somewhat minimalist, in which it emphasizes the action against the protagonism of the creator user. It must be taken into account that most of the live broadcasting activity of this platform is not carried out through mobile devices, but through personal computers, which have a live-video production studio.

### 3.6. Twitter

In the same way as the rest of massive social media, the successful microblogging platform (based, therefore, on the combination of the double condition of a blog and instant messaging) has implemented a live-video transmission module, after the disappearance in March 2021 of its subsidiary platform Periscope, although it continues to present text as the main content. Proof of this is the design of the interface that places the actions related to the live show in the second (or third) plane.

Once we access the app, which places us in the publication module, we must press the tweet button to enter the content creation submenu. This is where Twitter prioritizes text, hovering over what's happening? and displaying the virtual keyboard to facilitate and promote written messages (see figure 6). At the same time, it makes two icons available to the user, an audio icon that allows you to record sound messages and a second camera icon. Accessing this image module does not directly lead to the live broadcast but instead presents it as an option together with video (videorecording) and capture (still-image capture), the latter being the one that appears by default, with which to finally access the streaming module, we must move the text button to "live".

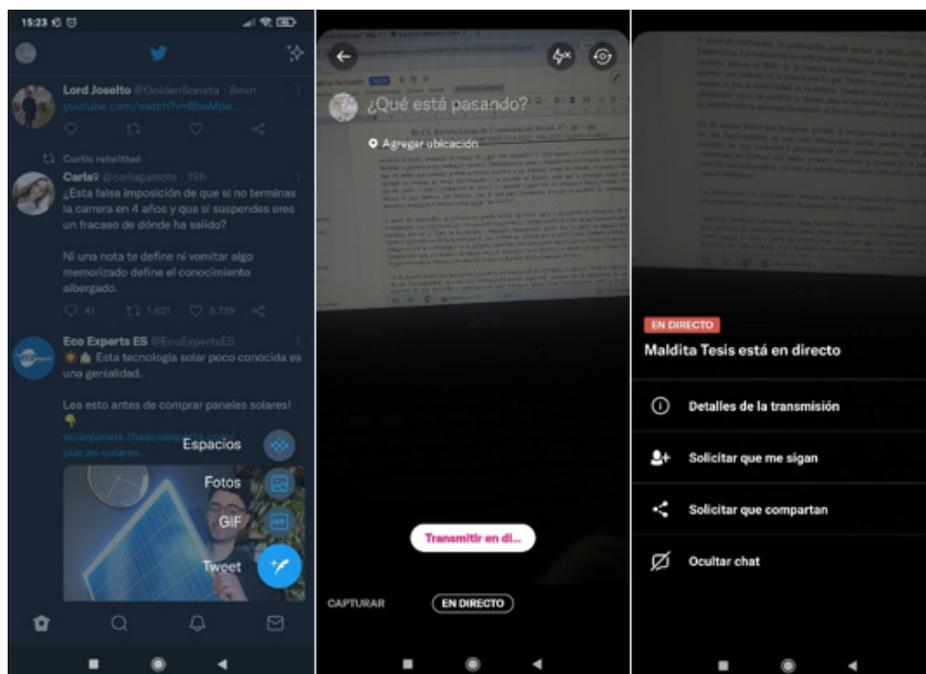


Figure 6: Twitter Menu  
Source: Twitter (mobile app)

At the content level, the publication can include a short title and incorporate the location of the transmission. The live video not only allows you to switch the camera, like the rest of the apps but also to activate the camera flash and transmit only audio. For its part, the camera that appears by default is the rear one, so Twitter does not bet on the selfie as the main format, although it does on the verticality of the image. It is also worth mentioning some exclusive actions of this platform such as a drawing module for inclusion in the live-video or the cinema mode that eliminates all the information from the screen during the broadcast, leaving only the video.

In the same way that Instagram allows the incorporation of guests to the direct, Twitter has this functionality, in this case, called inviting people, although with the limitation of a maximum of three guests and participation only through audio. This functionality, together with the aforementioned function of tweeting only recorded audio, shows the platform's commitment to this more informative medium, closer to radio, a model reinforced by other emerging platforms such as ClubHouse.

Interaction with users begins with the publication of the live broadcast tweet and is complemented by requests to follow or share.

Other features also stand out, such as broadcast monitoring, which not only allows the display of data such as the number of viewers or broadcast time, as most platforms do but also provides real-time information on the maximum peak of viewers and a section of statistics once the live video has finished that offers the streamer an extensive list of data related to the broadcast. Similarly, once the broadcast is over, Twitter offers a wide range of broadcast editing functions such as modifying the title, starting point or selecting the thumbnail. Regarding the management of the recording, besides having been incorporated into the user's profile, it allows the saving of the video on the device or its elimination.

**Table 1.** Camera formats of streaming apps

STREAMING APP	FORMAT	CAMERA
Facebook	Vertical	Front <sup>1</sup> / Rear
YouTube	Vertical	Front / Rear <sup>1</sup>
Instagram	Vertical	Front <sup>1</sup> / Rear
TikTok	Vertical	Front / Rear <sup>1</sup>
Twitch	Horizontal	Front / Rear <sup>1</sup>
Twitter	Vertical	Front / Rear <sup>1</sup>
1 Camera that appears by default when opening the streaming app		

Source: Own elaboration

### 3.7. Typology of functions of streaming apps

As indicated in the initial section, the secondary objective of the research is to propose a typology of functions of live-video apps based on the analysis carried out using the walkthrough method of the most representative platforms that make up the sample selection. After the exploration is carried out, we operationalize the different tasks and respective functionalities that the apps allow us, to group them into three categories:

-The operational functions integrate the different functionalities that manage the live transmission process. Some examples are the start or end of the broadcast, the recording, editing, downloading, or deleting of the video, once finished, the visualization of the duration of the live video, or the statistics of the transmission in terms of the number of viewers, comments, etc.

-The discursive functions bring together the functionalities related to expression, whether at a formal or content level, such as, for example, the creation of titles, the switching between front and rear cameras, the activation or deactivation of the microphone, special effects, or inclusion of audiovisual material in the transmission, including other users.

- Lastly, the interaction functions group the most social functionalities that allow you to share the video with other users. Some of the interaction functionalities identified are invitations to join the broadcast, either as spectators or as guests to participate in the live video, actions to promote or share the live video and its recording with other platforms or services, user comments, or money-raising.

#### 4. Discussion and conclusions

In light of the results obtained in this study, we conclude that the creators of mobile apps' interfaces for live social video broadcast predefine communication behavior patterns from the app itself that translate into a preference for the use of certain functionalities and, with it, the pre-eminence of some options over others in their expressive use. The identification, description, and categorization of the functionalities of live-video apps for users, thus, represents a first step in the research of the grammatization of actions by apps and platforms. As is collected through the analysis of the interface design through the walkthrough method, the functionalities offered by these apps condition both the live broadcast of content by users and their consumption, as a framework for action aimed at the construction of grammar in the expressive use of the app.

Its design, thus, guides those functionalities that could be of most interest to the creators of the apps, from an expressive and social point of view, but also a commercial point of view. Related to its visual appearance, Wang and Li (2017) highlight the advances in understanding the relationship between the aesthetics of apps, including interface design in HCI, and user response, as part of marketing strategies. Citing Boyd, Kannan, and Slotegraaf (2019), the type of features incorporated in the design of an app plays an important role in determining the perceived value of companies, so that the design of the interface acquires a commercial function, besides representing the brand and positioning it in the market. The results obtained in the descriptive and comparative analysis carried out and the knowledge of the commercial will of the creators of the apps can lead us to conclude that social streaming platforms show an interest in guiding users towards those functionalities within the live-video broadcast that are most convenient for them from a commercial point of view.

Simply and intuitively, through a few clicks, the consumers of these apps can start a streaming broadcast and use the audiovisual potential that these tools offer them. This simplification, which paradoxically is reached after a thorough analysis of the apps' interfaces, seeks to reaffirm the identity of the prosumers who use them in a double way: attending to the aforementioned uses and drawing their attention to certain functionalities such as those that occupy us. Similarly, it can be understood as an attempt to make the interface a familiar and conducive environment for users but also as an imposition on how this tool should be used by these prosumers.

This "grammar of action" (Agre, 1994) does not preconfigure only the actions integrated into the platform (Gerlitz and Rieder, 2018) since the design of its interface could be carried out having taken into account the marketing market positioning strategy. That is why this planning is compensated and rewarded through incentives such as the monetization of content or the greater visibility and promotion of producer users and their channels (remember that platforms such as YouTube and TikTok, for example, only allow direct broadcasts to those creators who accumulate more than 1,000 subscribers, which gives an idea of the importance they attach to this functionality). Planning that, by the way, is complementary to other mechanisms associated with cultural platformization that condition the type of content produced in these social networks (Cunningham and Craig, 2021), with which it is possible to subsidize the creation of content through regulatory channels both at the content and discourse levels. This fact is more evident in the apps designed for platforms of the second generation of entertainment social media -specifically Instagram, TikTok, and Twitch-, following the name of Cunningham and Craig (2019).

On the contrary, the first generation -Facebook, YouTube, and Twitter- have subsequently incorporated these live-video utilities with a dual purpose: first, to combine uses, technologies, and markets within them; In this way, an attempt is made to gather the greatest number of functions and tasks – "unitary actions", in the words of Gerlitz and Rieder (2018)- within the grammatization of user actions common to these social networks (Coromina et al., 2018). This grammatization is inevitably linked to a pedagogical desire of the platforms and their developers who, in this way, want to guide users on how and for what they should use these apps. Secondly, it is intended to limit the expansion of the most recent

social platforms. This oligopolistic practice is demonstrated by the emergence of large conglomerates in digital media following the acquisition of Vine and Periscope by Twitter, Instagram by Facebook, and Twitch by Amazon. However, the live-video functionalities do not differ much from one social platform to another. This conservatism in the design of interfaces is due to the intention of not provoking an alienation effect on users, who are already accustomed to using these utilities in other similar apps but also not to modify too much a tool with proven success.

As for the production of audiovisual texts, the functions activated by default in the apps determine their style, inviting users to make specific uses, while acting as a hallmark of the platform itself. Those that have the front camera as a preset value when starting the live-video function (video-selfie) focus attention and prominence on the person who created the content, while, on the opposite side, those that prioritize the rear camera emphasize the focus on the people or the scene before them, even though the prosumer appears as a voiceover narrator. On the other hand, the apps that predetermine the use of the vertical format (all those analyzed in this study except Twitch) highlight the image capture device (the mobile phone) and the advantages linked to it, such as mobility and agility in the emission, and they seem to promote a parallel reception also in mobile devices; On the other hand, Twitch presets the horizontal format because it intends to focus its use on the production of content from desktop computers and that the reception of these live-video broadcasts occurs in similar conditions and devices, given the immersive nature of the consumption experience that they offer to their community.

We want to highlight as a contribution of this research the categorization of the functionalities of social live-video apps. In an exploratory way, the functions offered by streaming apps have been identified, described, and compared with each other to, in a second step and following the second of our objectives, establish a typology of functions in three classes: operational, discursive, and interaction. This classification recognizes common guidelines between app interfaces and their behavior patterns. The identification of categories around the functionality of the apps represents a further step in the recognition of the structuring of user actions and, ultimately, in the study of action grammar in live-video apps. At the same time, we consider that this typology can be applied to the interface design of apps in other areas.

We conclude that this research achieves its objectives by determining the behavioral guidelines established by the creators of live-video apps inserted in the selected platforms and, likewise, a typology of their functions that can be extended to other streaming apps is formed. The object of study addressed here is a topic of great interest and path that can be developed through future lines of research that delve into the transcendental changes in the media ecosystem, but also cultural and, above all, visual changes that the worldwide popularization of using these video tools is causing.

## 5. Referencias

- Agre, P. E. (1994). Surveillance and capture: Two models of privacy. *The information society*, 10(2), 101-127. <https://doi.org/10.1080/01972243.1994.9960162>
- Aguado, J.M., Martínez, I. & Cañete-Sanz, L. (2015). Tendencias evolutivas del contenido digital en aplicaciones móviles. *Profesional de la información*, 24(6), 787-96. <https://doi.org/10.3145/epi.2015.nov.10>
- Apablaza-Campos, A. & Codina, L. (2018). Social Media Live Streaming: estudio de caso y diseño de matriz de análisis. *Cuadernos.Info*, 43, 161-180. <https://doi.org/10.7764/cdi.43.1342>
- Barns, S. (2019). Negotiating the platform pivot: From participatory digital ecosystems to infrastructures of everyday life. *Geography compass*, 13(9), 1-13. <https://doi.org/10.1111/gec3.12464>
- Boyd, D.E., Kannan, P.K. & Slotegraaf, R.J. (2019). Branded Apps and Their Impact on Firm Value: A Design Perspective. *Journal of Marketing Research*, 56(1), 76–88. <https://doi.org/10.1177/0022243718820588>

Coromina, O., Prado, E. & Padilla, A. (2018). The grammatization of emotions on Facebook in the elections to the Parliament of Catalonia 2017. *Profesional de la información*, 27(5), 1004-1011. <https://doi.org/10.3145/epi.2018.sep.05>

Cortés-Camarillo, C.A., Alor-Hernández, G., Olivares-Zepahua, B.A., Rodríguez-Mazahua, L. & Pe-láez-Camarena, S.G. (2016). Análisis comparativo de patrones de diseño de interfaz de usuario para el desarrollo de aplicaciones educativas. *Research in Computing Science*, 126, 31-41. <https://doi.org/dx.doi.org/10.13053/rcs-126-1-3>

Cunningham, S. & Craig, D. (2019). Social Media Entertainment. *The New Intersection of Hollywood and Silicon Valley*. New York University Press.

Cunningham, S. & Craig, D. (2021). Creator Culture: An Introduction to Global Social Media Entertainment. New York University Press.

De-Aguilera-Moyano, M., Castro-Higueras, A. & Pérez-Rufí, J.P. (2019). Between broadcast yourself and broadcast whatever: YouTube's homepage as a synthesis of its business strategy. *Profesional de la información*, 28(2), 1-14. <https://doi.org/10.3145/epi.2019.mar.06>

Duguay, S. (2020). You can't use this app for that: Exploring off-label use through an investigation of Tinder. *The information society*, 36(1), 30-42. <https://doi.org/10.1080/01972243.2019.1685036>

Gandolfini, E. (2016). To watch or to play, it is in the game: The game culture on Twitch.tv among performers, plays and audiences. *Journal of gaming & virtual worlds*, 8(1), 63-82. [https://doi.org/10.1386/jgvw.8.1.63\\_1](https://doi.org/10.1386/jgvw.8.1.63_1)

Gerlitz, C. & Rieder, B. (2018). Tweets Are Not Created Equal: Investigating Twitter's Client Ecosystem. *International journal of communication*, 12, 528-547. <https://ijoc.org/index.php/ijoc/article/view/5974>

Gillespie, T. (2010). The politics of platforms. *New media & society*, 12 (3), 347-364. <https://doi.org/10.1177/1461444809342738>

Gillespie, T. (2015). Platforms Intervene. *Social media + society*. <https://doi.org/10.1177/2056305115580479>

Google (2021). Ayuda de YouTube. <https://creatoracademy.youtube.com/page/lesson/livestream-production?hl=es>

Helmond, A. (2015). The Platformization of the Web: Making Web Data Platform Ready. *Social media + society*, 1-11. <https://doi.org/10.1177/2056305115603080>

ISO (2021). Usabilidad. ISO 25000. <https://tinyurl.com/yvsw327w>

Leaver, T. Highfield, T. & Abidin, C. (2020). *Instagram: Visual Social Media Cultures*. Polity Press.

Li, Y., Wang, C. & Liu, J. (2020). A Systematic Review of Literature on User Behavior in Video Game Live Streaming. *International Journal of Environmental Research and Public Health*, 17(9), 3328. <https://doi.org/10.3390/ijerph17093328>

Magaudda, P. & Solaroli, M. (2020). Platform Studies and Digital Cultural Industries. *Sociologica*, 14(3), 267-293. <https://doi.org/10.6092/issn.1971-8853/11957>

Morris, J.W. & Murray, S. (2018). *Appified. Culture in the Age of Apps*. Ann Arbor: University of Michigan Press.

Nichols, T.P. & LeBlanc, R.J. (2020). Beyond Apps: Digital Literacies in a Platform Society. *The reading teacher*, 74(1), 103-109. <http://doi.org/10.1002/trtr.1926>

Nieborg, D.B., & Poell, T. (2018). The platformization of cultural production: Theorizing the contingent cultural commodity. *New Media & Society*, 20(11), 4275–4292. <https://doi.org/10.1177/1461444818769694>

Nieborg, D.B. & Helmond, A. (2019). The political economy of Facebook's platformization in the mobile ecosystem: Facebook Messenger as a platform instance. *Media, Culture & Society*, 41(2), 196–218. <https://doi.org/10.1177/0163443718818384>

Noë, A. (2015). *Strange Tools: Art and Human Nature*. Hill and Wang.

Poell, T., Nieborg, D.B. & Duffy, B.E. (2021). *Platforms and Cultural Production*. Polity.

Polson, P.G. & Lewis, C.H. (1990). Theory-based design for easily learned interfaces. *Human-computer interaction*, 5, 191-220.

Play Store (2018). Instagram. <https://tinyurl.com/59e777zs>

Play Store (2020). Twitch. <https://tinyurl.com/yuzd8bbw>

Ruiz, A., Arciniegas, J.L. & Giraldo, W.J. (2018). Caracterización de marcos de desarrollo de la interfaz de usuario para sistemas interactivos basados en distribución de contenido de video. *Ingeniare. Revista chilena de ingeniería*, 26(2), 339-353. <http://dx.doi.org/10.4067/S0718-33052018000200339>

Ruiz Gaona, A. (2019). *Marco de desarrollo de interfaces de usuario de sistemas interactivos basados en distribución de contenido de video* (Tesis doctoral). Popayán: Universidad del Cauca. <https://tinyurl.com/ez73fndb>

Scolari, C.A. (2018). *Las leyes de la interfaz: diseño, ecología, evolución, tecnología*. Gedisa.

Simon, P. (2011). *The age of the platform: how amazon, apple, facebook, and google have redefined business*. Simon HRIS Consulting Llc.

Srnicek, N. (2017). The challenges of platform capitalism: Understanding the logic of a new business model. *Juncture*, 23(4), 254-257. <https://doi.org/10.1111/newe.12023>

Statista (2021a). Digital Market Outlook. <https://tinyurl.com/bexvyf4>

Statista (2021b). Number of apps available in leading app stores as of 4th quarter 2020. <https://tinyurl.com/9385puny>

Tiwana, A. (2014). *Platform Ecosystems. Aligning Architecture, Governance, and Strategy*. Morgan Kaufmann.

Törhönen, M., Sjöblom, M., Hassan, L. & Hamari, J. (2019). The rise of online media entrepreneurs: A study on the motivations of video content creators on YouTube and Twitch. In: *Gamification Group. Esports. Final Report* (25-26). Faculty of Information Technology and Communication Sciences, Tampere University. <https://tinyurl.com/yfuyf7tc>

Torres-Martín, J.L. & Villena-Alarcón, E. (2020). Usos y recursos de TikTok como herramienta de comunicación. En: F.J. Herrero-Gutiérrez; J. Segarra-Saavedra; T. Hidalgo-Marí (coords.). *La narrativa audiovisual. Del concepto a la alfabetización mediática*, (259-269). Fragua.

Twitch (2021). Press center. <https://www.twitch.tv/p/press-center/>

Van Dijck, J., Poell, T. & De Waal, M. (2018). *The Platform Society: Public Values in a Connective World*. Oxford University Press.

Wang, M. & Li, X. (2017). Effects of the aesthetic design of icons on app downloads: evidence from an android market. *Electron Commer Res*, 17, 83-102. <https://doi.org/10.1007/s10660-016-9245-4>

WARC (2021). State of streaming: Twitch up 83% in 2020. <https://tinyurl.com/6kvuster>

We Are Social (2021). Digital 2021. <https://wearesocial.com/digital-2021>

Wilson, C. (2014). *User interface inspection methods*. Morgan Kaufmann.

Woodcock, J. & Johnson, M. R. (2019). Live Streamers on Twitch.tv as Social Media Influencers: Chances and Challenges for Strategic Communication. *International journal of strategic communication*, 13(4), 321-335. <https://doi.org/10.1080/1553118X.2019.163041>

## AUTOR/ES:

**Antonio Castro Higuera**  
Universidad de Málaga

Associate Professor. Department of Audiovisual Communication and Advertising. Universidad de Málaga. He has a Ph.D. in Communication and is an expert in cultural and creative industries. He has been a professor at the Faculty of Communication Sciences at the Universidad de Málaga since 2007. He has taught undergraduate and postgraduate courses at the Universidad Internacional de la Rioja (UNIR), the Universidad Internacional Isabel I, and has been a tutor for the Degree in Digital Design and Creation of the Universitat Oberta de Catalunya (UOC). In the professional field, he has been National Technical Deputy Director of the television network Localia TV, Technical Director of the production company of Grupo Prisa, Plural Entertainment, and producer of informative programs for TVE2, among other activities related to television.

[acaastro@uma.es](mailto:acaastro@uma.es)

**Índice H:** 4

**Orcid ID:** <https://orcid.org/0000-0001-7406-5550>

**Google Scholar:** [https://scholar.google.es/citations?user=MHgY\\_owAAAAJ&hl=es&authuser=1](https://scholar.google.es/citations?user=MHgY_owAAAAJ&hl=es&authuser=1)

**ResearchGate:** [https://www.researchgate.net/profile/Antonio\\_Castro17](https://www.researchgate.net/profile/Antonio_Castro17)

**Academia.edu:** <https://uma.academia.edu/AntonioCastroHiguera>

**José Patricio Pérez-Rufi**  
Universidad de Málaga

Professor of the Department of Audiovisual Communication and Advertising of the Faculty of Communication Sciences of the Universidad de Málaga since 2009. He has a Ph.D. from the Universidad de Sevilla, a degree in Audiovisual Communication, and a degree in Journalism from the Universidad de Sevilla. He teaches the subjects of Structure of the Audiovisual Market, Graphic Design, and Creative Industries and Economics: Commercialization of the Audiovisual Product at the Universidad de Málaga. He has published various monographs in publishers such as Síntesis, Quiasmo, or T&B, besides a large number of articles in academic journals on Communication. Member of the Research Team “COMMUNICAV Audiovisual and multimedia creation, production, and postproduction processes” (SEJ-585).

[patricioperez@uma.es](mailto:patricioperez@uma.es)

**Orcid ID:** <http://orcid.org/0000-0002-7084-3279>

**Google Scholar:** <https://scholar.google.es/citations?user=Qf8yHP0AAAAJ&hl=es>

**ResearchGate:** [https://www.researchgate.net/scientific-contributions/2070157721\\_Jose\\_Patricio\\_Perez\\_Rufi](https://www.researchgate.net/scientific-contributions/2070157721_Jose_Patricio_Perez_Rufi)

**ResearchID:** <https://publons.com/researcher/2276402/jose-patricio-perez-rufi/>

**Scopus ID:** <http://www.scopus.com/authid/detail.url?authorId=57000555800>

**Dialnet:** <https://dialnet.unirioja.es/servlet/autor?codigo=1322727>

**José Luis Torres Martín**

Universidad de Málaga

Interim Substitute Professor. Department of Audiovisual Communication and Advertising. Universidad de Málaga. He has a Ph.D. in Audiovisual Communication from the Universidad de Málaga. Teacher and researcher in the Department of Audiovisual Communication and Advertising of the Faculty of Communication Sciences of the Universidad de Málaga since 2011. He has been a member of the Research Group “Still image, mass communication, and digital moving. The Andalusian case” (SEJ-411) and is currently a component of “Research on Transformations in the Communication Ecosystem (TRANSCOMUNICAR)” (SEJ-390). His lines of research deal with transmedia narratives, social networks, and gender studies in audiovisual fiction. He developed his professional activity as an editor, camera operator, and director in different Andalusian media for 16 years.

[jltorres@uma.es](mailto:jltorres@uma.es)

**Índice H:** 2

**Orcid ID:** <https://orcid.org/0000-0001-6556-1560>

**Google Scholar:** <https://scholar.google.es/citations?hl=es&user=R3SzHL0AAAAJ>

**ResearchGate:** [https://www.researchgate.net/profile/Jose\\_Torres\\_Martin](https://www.researchgate.net/profile/Jose_Torres_Martin)

**Mireya Rocío Carballeda Camacho**

Universidad de Málaga

Interim Substitute Professor. Department of Audiovisual Communication and Advertising. Universidad de Málaga. Degree in Audiovisual Communication from the Universidad de Málaga. She is a doctoral candidate in the Interuniversity Communication program and a professor in the Audiovisual Communication department of this University, where she teaches photography, video editing, and audiovisual language. Member of the research group SEJ-435: Advanced audiovisual content (Communication).

[mireya.cc@uma.es](mailto:mireya.cc@uma.es)

**Orcid ID:** <https://orcid.org/0000-0002-0754-898X>

**Google Scholar:** <https://scholar.google.com/citations?user=nJ-tb4wAAAAJ&hl=es&authuser=3&oi=sra>

**Miguel de Aguilera Moyano**

Universidad de Málaga

Full Professor. Department of Audiovisual Communication and Advertising. Universidad de Málaga. He has a Ph.D. in Political Science and Sociology. Professor of Audiovisual Communication and Advertising at the Universidad de Málaga, where he was Dean of its Faculty of Communication Sciences (1996-2002) and General Director of Communication and Information (2004-2011). Holder of the UNESCO International Chair in Communication (Universities of Lyon and Grenoble) in 2006. Secretary-General of the Research Committee on Communication, Knowledge, and Culture of the International Sociological Association (1990-94). Author of more than a hundred long publications with publishers and journals from Germany, the United Kingdom, Italy, France, Cameroon, Burkina Faso, the United States, Mexico, Brazil, and Austria, besides the Spanish.

[deaguilera@uma.es](mailto:deaguilera@uma.es)

**Índice H:** 16

**Orcid ID:** <http://orcid.org/0000-0002-6485-6807>

**Google Scholar:** <https://scholar.google.es/citations?user=v1en2UUAAAAJ&hl=es>

**ResearchGate:** [https://www.researchgate.net/profile/Miguel\\_De\\_Aguilera2](https://www.researchgate.net/profile/Miguel_De_Aguilera2)

**Academia.edu:** <https://ucm.academia.edu/MigueldeAguilera>

**Scopus ID:** <https://www.scopus.com/authid/detail.uri?authorId=57112583700>