

Mobile Videography on YouTube and the Significance of the Marginalised Creator

Oscar E. Quirós

ABSTRACT

This research aims to identify the variables that contribute to the differential viewership of mobile-phone videos on YouTube. To achieve this, a Generalized Linear Mixed Model (GLMM) is employed to examine the correlations among various variables in a randomly selected video database. The findings of the analysis reveal several significant and culturally insightful associations. Notably, subgenres such as melodrama (soap-operas or telenovelas), action, and comedy emerge as distinctive categories, irrespective of the total number of views. Comedies and action videos created by male filmmakers receive higher viewership. Similarly, melodramas created by female filmmakers, particularly those hailing from marginalized and rural backgrounds, hold greater statistical significance. These findings highlight the relevance of gender and social context in shaping viewer preferences and challenge the conventions of mainstream media in the respective countries of origin.

Keywords: Marginalised Social Relevance, Smartphone Videography, Soap-Opera Melodrama, Telenovela.

Published Online: June 25, 2023

ISSN: 2736-5522

DOI: 10.24018/ejsocial.2023.3.3.470

O. E. Quirós *

Universidad de Costa Rica, Golfito, Costa Rica

(e-mail: oscar.quiroruiz@ucr.ac.cr)

ORCID: 0000-0002-9990-3298

*Corresponding Author

I. INTRODUCTION

Mobile-phones, or smartphones, have become a powerful tool and a necessity for vast amounts of people around the world. It is the Swiss knife of the photoelectric-effect epoch, where people might feel vulnerable if not carrying one (Reichow & Friemel, 2020). In recent years, there has been an increase in academic research on the use of these devices and their multiple applications (Galperin *et al.*, 2020; Peters & Allan, 2016), and about different youth social practices on YouTube (Balleys *et al.*, 2020; Caron *et al.*, 2019), among others. One of the uses of this versatile apparatus is to record moving images. They now come equipped with high resolution cameras; and, this has opened up the possibility for extremely low-budget video/cinematic productions. For the purpose of this research, I will be using both mobile and smartphone to mean the same, even though I acknowledge there are some aesthetic differentiation, resolution and capabilities from early phone cameras of the early 2000s to the most recent ones (Baker *et al.*, 2009; Berry, 2017).

Researchers like Rieser (2011), Snickars and Vonderau (2012), and Goggin and Hjorth (2014), among others, have addressed and studied the cultural and aesthetic implications of this mobile media (Berry & Schleser, 2014). The smartphone video camera is used and perhaps best known for recording incidental events and a large plethora of “irrelevant” situations. Some of these shorts could include more relevant issues such as political upheavals and manifestations, yet recorded as a casual, not prepared, event. Some projects, however, appear to be produced following a more elaborate planning scheme. Most of this, non-incidental, creative smartphone videography would have remained in obscurity had it not been for the services of internet platforms like YouTube.

Posting the most banal video on YouTube can label a mobile videographer as a “creator” -the most sought-after cognitive level in educational pedagogy (Anderson *et al.*, 2001). From the artistic point of view, the term creator presupposes a correlation with a refined product with a distinctive paradigmatic aesthetic image. And it might be possible to include such a canonic aesthetic image, considering that the gap between analog filmstock and digital cameras (and mobilephone cameras) has been closing (Loertscher *et al.*, 2016). These smartphone creators, however, emerge from every corner of the world and all walks of life, with or without formal education, with or without a refined product. Expanding on Jennifer Malkowski comment that non-experts founded cinema studies, it appears that non-experts are now taking over this new media themselves (Malkowski, 2018). Experts, but mostly non-experts, are uploading projects in different languages and dialects about different topics and issues and adding different levels editing and personal originality to that videography up to a point that appears there is no correlation amongst the lot.

The aesthetics, originality, country or region of origin, language, length, and genres are so diverse that it is very difficult to categorise the smartphone videography and understands why the viewing differences.

The scholarly discourse on this videography seems to be equally disperse (Hilderbrand, 2018); or, it might be disregarded for being theoretically and/or aesthetically irrelevant. Simply viewing the content on YouTube does not give us the whole picture of course (Burgess & Green, 2009, p. 38). Away from the celluloid, the up-scale video camera, or even the consumer camera, the smartphone videography brings us to the issue of the people, rather than the aesthetics, in an apparent dichotomy yet one might explain the other. In this sense, the mobile-videography phenomena challenges and exemplifies the Marxian and Weberian paradigm about the ownership of the means and relations of production.

The aim of this research is to understand the best combination of variables that make some mobile-phone projects draw more viewers than others on YouTube. I argue that one of the best methods to scrutinize this eclectic videography is to use inferential statistical as means to identify and understand some of its parts and their relative influence on the viewing effect. We depart from the question of what might be the variables that make some videos more appealing or viewed than others, by an enormous range of difference. In order to find possible clues to this question, this research was organized by selecting 6 different variables from each video from the selected database. The data was then analysed using both SPSS v20, and Infostat v2014. The final objective of the paper is to discuss the social correlations and implications generated by inferential statistical analysis.

II. METHODOLOGY

A. Inferential Statistics

Inferential statistics is a methodological analysis extensively used in the sciences mostly because deduces properties of an underlying distribution of probability from a data set sampled from a larger group (Upton & Cook, 2008). The advantage of this type of statistics is that it would allow us to see correlations or trends that are normally not perceived with descriptive statistics, let alone with direct observations. Of the many types of analytical models, the Generalized Linear Mixed Model (GLMM) was chosen because it allows to include both numerical as well as nominal information. Thus, this model is very well suited to infer significant correlations or trends from a smartphone videography dataset, which contains both types of data.

B. Database

To build the database the field work started on the 15th of September, 2017 and concluded on the 18th of September, 2021. In order to construct it with randomly selected entries, the search for mobile videos was done using the following query phrases in the “search” bar on top of this platform screen:

- i. smartphone cinema,
- ii. smartphone movie,
- iii. mobile phone cinema (also mobile cinema),
- iv. mobile phone movie (also mobile movie),
- v. iphone short film (movie),
- vi. smartphone filmmaking.

The criteria for selecting the wording or phrases used is based on both the common use and the discussions brought in by several scholars like Sarah Atkinsons for mobile cinema (Atkinson, 2017), Max Schleser for mobile-mentaries, Marsha Berry and Schleser for mobile filmmaking (Berry & Schleser, 2014; Schleser & Berry, 2018), Jonathan Dockney and Keyan Tomaselli (Dockney & Tomaselli, 2009) as well as Katie MacEntee, Casey Burkholder and Joshua Schwab-Cartas for cellphilm (MacEntee *et al.*, 2016), and Silvie Prasad for her lectures on creative mobile media (2017), among others.

A new set of queries was included by modifying the previous list adding a language like Arabic, English, Spanish, etc. Both, the name of the language in English language and in the language itself was used, like “Español,” or “Italiano,” “Português” or “Deutsch,” when it is a Latin-character-based language. I also added the entire query translated into other European languages, for instance “Cinéma avec smartphone,” “Cine con teléfono inteligente,” etc. And, in order to make sure they were made with a smartphone camera, each individual video was reviewed. The criteria to ensure it was mobile smartphone-made was, either that the posting or title indicated it, or it was possible to see a clear reflection or shade of the actual phone recording. The database included several variables such as genre, subgenre, name of channel, address of the actual video, name of the creator, country of origin, duration of the video, date that video went online, date the video was reviewed, numbers of views at the time of the review, gender of the creator(s), topic, and the predominant language used. The actual number of views could not be used because these data have an inherent bias as each video had been online for different number of days. There are different ways to correct a data sampling bias with statistics models like the quasi-linear Poisson point process (Komori *et al.*, 2020). But a very simple approach to correct this bias is to use the average number of views per day. This was achieved by dividing the total number of views from the “second check” by the number of days a video had been online. Average views per day, thus is the dependent variable, or the variable we want to understand (“average views or data views”).

The definition for each sub-genre is a loose interpretation of literary categories from Kant, Hegel, Schiller, Coleridge among others (Eagleton, 1996), so each video was assigned to a given sub-genre because it showed similar recurrent patterns, often called “motifs,” as Novakova and Siepmann comment (2020). These recurrent motifs, anyhow, is what has normally been used to loosely categorise cinematic/videographic sub-genres. Let me add to this categorisation a new, non literary, sub-genre named “Vlog.” It refers to a video log, a style of videography in which the author or creator comments any issue as part of the video.

A total of 201 videos were randomly selected and analysed. The initial analysis of statistical assumptions indicated that there were four outliers in the number of average views that might skew the final analysis. Case 185 was unusually high, while cases 1, 2, 3 were unusually low. After calculating the Inter-Quartile Range rule with a multiplier of 2.2, it showed that it only needed to remove the lower outliers to make the data acceptably homogenic (Hoaglin *et al.*, 1986). The database ended up with 198 cases; still strong enough to provide us with statistically meaningful results. Out of this total, 94 were fiction and 104 documentary works. For the purpose of this research, fiction and documentaries are considered genres. Both genres are divided into seventeen sub-genres that may occur in both fiction and documentary. The largest group are “actualités”, or videos that simply show urban or rural settings without explanations nor any clear intervening or mediating factor on part of the videographer. For the purpose of this paper, rural refers to a setting outside city limits where dwellers derive an income mostly from farming and/or raising cattle (FAO, 2018).

TABLE I: VIDEOS ACCORDING TO GENDER/SEX OF CREATOR

| | | Gender Creator | | | |
|-------|----------|----------------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Undeclrd | 1 | 0.5 | 0.5 | 0.5 |
| | Both | 7 | 3.5 | 3.5 | 4.0 |
| | Female | 24 | 12.1 | 12.1 | 16.2 |
| | Male | 166 | 83.8 | 83.8 | 100.0 |
| | Total | 198 | 100.0 | 100.0 | - |

Note: Own sources

All of the videos were uploaded to YouTube between 2009 and 2019. While only two were from 2009, 22 were from 2019. The most “prolific” year was 2017 with 60 videos. Most of this videography was authored by males (166) while only 24 were made by females, 7 by both, and 1 undeclared gender, as seen in Table 1. The three cases withdrawn from the main analysis were coincidentally made by females. The duration, or length in seconds, of each video varied from a mere 36 seconds to 5,954 seconds, or feature length 1:39:23 hours. The largest group is for those shorter than 333 seconds, with 101 videos.

The database contains videos spoken in 12 different languages plus a group of silent videos. The larger group of videos were in English language (82) while only 3 were produced each in Dutch, German, Italian, Sinhala, and Swahili. The second largest group is for silent videos (30), indicated as “none” in the analysis. Spanish comes as a close third with 29 videos. The fourth largest group are those in French. And in a distant fifth a group of 7 videos are in Hindi.

C. Analysis

To analyse the data two separate statistics packages were used: SPSS v20 and Infostat v2014 (IBM, 2015; Di Rienzo *et al.*, 2017). The objective was to understand how the other variables might explain the average number of views. To achieve this, SPSS v20 is used to run the generalized linear mixed model (GLMM) and to generate the graphics (Pan *et al.*, 2020). In addition, Infostat v2014 was also used to run the GLMM to generate the tables. The GLMM allows numerical data such as average number of views per day, and the length of each video as well as nominal data such as gender of filmmaker, genre, topic, country of origin. The latter two were also dropped from the final analysis because they also included cases with only one sample per topic and country; and, this is statistically unreliable. Those cases are included in the analysis but the variables about topic and the country were not, to avoid skewing.

Before the inferential statistic analysis is applied, it is necessary to perform several tests in order to insure the data has been properly collected and organized. So, the Durbin-Watson test was applied, with a result of 2.025 confirming that the database had sufficient randomness. In addition, a scatterplot from a partial regression test indicates there is a linear relationship between both the dependent and each of the independent variables as well as the dependent and all the independent variables; and, subsequent checks showed no multicollinearity through inspection of correlation coefficients for Tolerance/VIF. After several trial analysis based on the standard statistical assumptions such as linearity, normality, homoscedasticity, independent of observation, and no-significant-outliers, it was decided that only a selected number of independent variables might provide a clue to the original question (Hoaglin *et al.*, 1986). Variables like country of origin and topic had to be dropped as explained before for skewing the analysis. In addition, the data for “views” had to be “dimensionally reduced” to accommodate to a similar scale of the other variables. This is common process in statistics using principal component analysis (PCA) procedures (IBM, 2015).

Therefore, the generalized linear mixed model was run using the variables “genre,” “SubGenre,” “gender of creator (SexCreator, or sex),” “duration of the video (length),” and “language.” All these variables are tested “against” the dependent variable: “average views per day”. In the analysis and results the term “data views” or “views” was used for simplicity. It can be concluded, then that the results from the GLMM are fairly accurate and trustworthy to draw valid conclusions.

III. RESULTS

In order to test for possible correlations between the numbers of views and the other variables, a generalized linear mixed model (GLMM) was applied using both Infostat v.2014 and SPSS v20. Table II shows the results generated by Infostat using “Views” as the variable we want to understand. The GLMM approach allows us to combine two or more variables, as per random effect, hence generating results if there is a correlation between any combination that might explain why they have more views. My emphasis is on those combinations of random effects as they might provide better explanations. The statistically significant results are highlighted with **bold letters**, such as the “gender and length” combination. In this case it is significant at the <0.000 level (see **Pr(>F)**column), the highest of significance in statistics. Thus, those results closest to 0.000 represent higher significance.

TABLE II: GENERALIZED LINEAR MIXED MODEL (SEQUENTIAL HYPOTHESIS TESTING USING INFOSTAT)

| | Df | Sum Sq | Mean Sq | F value | Pr (>F) |
|-------------------------------|-----------|--------------|-------------|-------------|---------------|
| Genre:SubGenre | 11 | 25.52 | 2.32 | 4.44 | <0.0001 |
| Genre:Gender | 2 | 0.27 | 0.14 | 0.26 | 0.7728 |
| Genre:Language | 7 | 10.65 | 1.52 | 2.91 | 0.0096 |
| Genre:Length | 1 | 4.03 | 4.03 | 7.72 | 0.0069 |
| SubGenre:Gender | 10 | 8.35 | 0.83 | 1.60 | 0.1244 |
| SubGenre:Language | 24 | 31.10 | 1.30 | 2.48 | 0.0016 |
| SubGenre:Length | 12 | 9.51 | 0.79 | 1.52 | 0.1379 |
| Gender:Language | 5 | 7.16 | 1.43 | 2.74 | 0.0252 |
| Gender:Length | 2 | 9.98 | 4.99 | 9.55 | 0.0002 |
| Language:Length | 8 | 12.72 | 1.59 | 3.04 | 0.0052 |
| Genre:Gender:Length | 1 | 0.36 | 0.36 | 0.69 | 0.4084 |
| Genre:Language:Length | 1 | 0.04 | 0.04 | 0.07 | 0.7929 |
| SubGenre:Gender:Language | 1 | 1.35 | 1.35 | 2.58 | 0.1124 |
| SubGenre:Gender:Length | 3 | 4.29 | 1.43 | 2.73 | 0.0498 |
| SubGenre:Language:Length | 4 | 2.13 | 0.53 | 1.02 | 0.4023 |
| Gender:Language:Length | 1 | 1.71 | 1.71 | 3.26 | 0.0750 |

These double combinations are statistically significant: 1 “SubGenre and Language” at 0.0016; 2 “Gender and Language” at 0.0252; and 3, “Language and Length” at 0.0052. Note that the “Gender:Length” combination is the most significant of all with a 0.0002 result. In addition, the triple combination of “SubGenre, Gender and Length” is statistically significant at 0.0498. This last result is perhaps one of the most revealing as three different variables serve better to explain higher viewership. The following tables provide additional more detailed information about all these three correlations.

A. Detailed SubGenre and Language Correlation

A detailed breakdown view of the “SubGenre and Language” GLMM result shows which specific subgenres and languages are making this combination statistically significant. In Table III we can see that the most significant SubGenre is “melodrama” at 0.024 because of the lowest coefficient. While “experimental” is statistically significant (Sig. column) it is irrelevant because its coefficient is negative at -1.773. Only English and Spanish are statistically significant in relation to SubGenres. Spanish, though, is statistically more significant because it has a lower p-value than English and the coefficient is higher on the positive side than that of English. In simple language this means that the subgenre “Experimental” is the least viewed when made in Spanish. But melodrama is most viewed when it is in Spanish language.

TABLE III: SUBGENRE AND LANGUAGE, GLMM DETAIL

| Fixed Coefficients Target: Views Data | | | | |
|--|-------------|------------|--------|-------|
| Model Term | Coefficient | Std. Error | t | Sig. |
| SubGenre=Experimental | -1.773 | 0.684 | -2.593 | 0.010 |
| SubGenre=Melodrama | 1.196 | 0.527 | 2.272 | 0.024 |
| Language=English | 1.229 | 0.530 | 2.320 | 0.022 |
| Language=Spanish | 1.486 | 0.583 | 2.548 | 0.012 |
| Probability distribution: Normal | | | | |
| Link function: Identity | | | | |

B. Detailed Gender and Length Correlation

A detailed breakdown view of “Gender/sex and Length” association allows us to see that length is highly significant in relation to the gender of the creator. However, each gender individually (Male, Female, Both, and Undeclared) is not significant. Yet, Female is statistically relevant at 0.068 as seen in Table IV. Notice that Male has a note indicating that this coefficient is set to zero because it is redundant. This occurs in a normal regression model that has the intercept activated. The intercept is necessary to clarify distinctions within a variable.

However because the Gender/Sex has only 4 groups (Male, Female, Both, and Undeclared), it suffers from perfect multicollinearity which is attributed to the largest group (Open.ED@PSU, 2020). In other words, it uses the largest group, Males, as the parameter and calculates what stands out more than the parameter. By definition, then we can understand that Female stands out as more relevant than males.

TABLE IV: GENDER AND LENGTH, GLMM DETAIL

| Fixed Coefficients | | | | |
|----------------------------------|----------------|------------|--------|-------|
| Target: Views Data | | | | |
| Model Term | Coefficient | Std. Error | t | Sig. |
| Intercept | 1.642 | 0.134 | 12.226 | 0.000 |
| Gender Creator = Both | 0.518 | 0.489 | 1.059 | 0.291 |
| Gender Creator = Female | 0.381 | 0.207 | 1.838 | 0.068 |
| Gender Creator = Male | 0 ^a | - | - | - |
| Length | 0.001 | 0.000 | 4.144 | 0.000 |
| Probability distribution: Normal | | | | |
| Link function: Identity | | | | |

C. Detailed SubGenre Length Correlation

A detailed view of the triple combination of “SubGenre, Gender, and Length” (as seen in Table II) provides a more complex and revealing correlation. As such it better explains the reasons behind higher viewership of the sampled database. In this case, the SubGenre Melodrama is statistically significant when in relation to Length and Female as the Gender of creator, as seen in Table V.

The other three subgenres in the chart, Experimental, Action, and Social are statistically significant in relation to Female filmmakers and Length, but on the negative side. This is indicated by the negative coefficient values of all three of them. Female, melodrama and length, therefore, stand out as correlated; with Female with a 0.036 significance result; melodrama with a 0.009; and length with a 0.002 significance value.

TABLE V: SUBGENRE, GENDER, AND LENGTH, GLMM DETAIL

| Fixed Coefficients | | | | |
|----------------------------------|-------------|------------|--------|-------|
| Target: Views Data | | | | |
| Model Term | Coefficient | Std. Error | t | Sig. |
| SubGenre = Action | -1.185 | 0.533 | -2.224 | 0.027 |
| SubGenre = Comedy | -1.118 | 0.307 | -3.645 | 0.000 |
| SubGenre = Experimental | -2.718 | 0.592 | -4.593 | 0.000 |
| SubGenre=Melodrama | 1.387 | 0.522 | 2.659 | 0.009 |
| SubGenre = Social | -0.912 | 0.307 | -2.967 | 0.003 |
| GenderCreator = Female | 0.453 | 0.215 | 2.109 | 0.036 |
| Length | 0.000 | 0.000 | 3.215 | 0.002 |
| Probability distribution: Normal | | | | |
| Link function: Identity | | | | |

IV. DISCUSSION

This research started with the question on what might be the variables that make some smartphone videos more appealing or viewed than others --in some cases by an enormous range of difference. I argued that it might be useful to approach this highly-diverse mobile and/or smartphone videography with a clean statistical tool as means to validate some of its components and their respective effect on the number of views. The results of a generalized linear mixed model provide us with several insightful correlations that are both significant and culturally revealing.

Three correlations stand out from the GLMM results. The first correlation points to Melodrama-Spanish/English, as seen in Table III. Both languages have a positive correlation to Melodrama. This is interesting considering that there is not a single video under the melodrama subgenre in English language in the database. However, the other subgenre in this result is that of Experimental, but with a negative coefficient. In the database we can see that Experimentals were made in English, None and Sinhala languages. This suggests that the significant negative correlation of Experimental is actually pointing to English language, not to Spanish.

In other words, Melodrama might correlate to Spanish while Experimental to English. This reflects a cultural tendency related to Melodrama as a preference perceived in conventional television audiences in different cultural settings. Joye *et al.* (2017) reflect on the widespread popularity of the telenovela sub-genre and format on the global scene and on the numerous local adaptation. Their study touches upon the appealing nature of this format and genre, very much in tune with the situation we are here observing with these female filmmakers. Waliaula also discuss the impact of the Spanish spoken telenovela (Soap-opera), as a melodrama format, and its ramifications at particular social strata in Africa (Waliaula, 2019). The appeal of the telenovela is also related primarily to female audiences. What it becomes interesting here is that there is some correspondance between the traditional television audiences and these video filmmakers. In both of these groups females are the significant factor.

The second notable correlation is also between Experimental/Comedy/Action-Not-Female-ShorterLength. In Table V, videos under Experimental, Comedy and Action subgenres are significant on the negative side when gender and length are co-factors. As female filmmakers show a positive significance, then it can be assumed that these three subgenres are correlated to other than females. In other words, it clearly indicates that videos in these three subgenres do not show a viewing preference when created by females and are longer in length. Conversely, it can be assumed that Experimental, Comedy and Action videos are preferred when made by males or both genders and are shorter in length. Again, this possible output might reinforce some cultural bias that males have a preference for action, comedy or experimental videos, as perceived that it might be the case in conventional cinema in the U.K. (Redfern, 2012). Redfern's study was done in a particular market; however, given the globalisation of tastes and aesthetics (Pieterse, 2019), it is expected that similar trends can be found in many other markets, or cultures. It would be interesting, though, to query if the actual viewers of these shorter, action genre are predominantly males; this of course, if we had access to the appropriate data.

The third notable correlation that merits a discussion is that of Melodrama-Female-Length. This triple correlation provides a more detailed and a synthetic amalgamation of the three previously discussed correlations. This correlation (SubGenre-Gender-Length) as shown in Table V directly indicates that Melodrama, Female and Length are the only ones in a positive correlation. This implies that when a Female filmmaker makes a longer Melodrama, then it scores a significant number of views. This of course are not in absolute numbers, but on a distributed probability based on the complete sampled group of 198 cases (Upton & Cook, 2008). Therefore, female filmmakers making melodramas would have more views the longer the videos are. This underscores a cultural tendency of television audiences where more than two billion people watch telenovelas (a form of television melodrama) around the world and it is one of the most important Latin American exports (Acosta-Alzuru, 2017). The data in Table III fits with Acosta-Alzuru (2017), Joye *et al.* (2017), and Waliaula's (2019) studies where Spanish language also relates to melodrama. As such, it appears that television audience responses and Female filmmakers of Melodramas in YouTube share some correlated commonalities.

Even though debatable, the association between female audiences and melodrama, in the television telenovela format has come up in several studies. Joye *et al.* address the cross cultural and cross-media adaptations of the telenovela to a point that it is difficult to compare this format within its different manifestations (2017). The realm of the telenovela goes beyond the female audience and a social class issue, as Ana López observes, to a plausible in a borderless mythic domain in the Spanish speaking world (López, 2002). It can be argued though that Joye, *et al.*, and López' positions are in agreement with this new world of mobile melodrama generated by female filmmakers, mostly in Spanish language. The database identify that most of this melodrama comes from rural El Salvador. Of course, this melodrama is not exactly the same as that produced by large corporations such as Telemundo, Venevisión, TV Azteca, or Televisa (Rios, 2017). But the fact that simple melodrama stagings created by female "campesinas" (country girl) with a mobile and distributed by an internet platform reveals a great deal of the underlying decolonizing effect of this filmography. Their handmade melodrama can be seen all over the world. In this sense, the mobile-videography phenomena challenges and exemplifies the Marxian and Weberian notions of ownership of the means and relations of production. There is no need to have access to sophisticated equipment and large capital to access a globalized audience. The means of production are at hand-reach, literally, by anybody, including a segment of the populations traditionally considered marginalized. That is, people who do not have easy access to financial, social services nor educational resources (Mowat, 2015). The disadvantages of being part of of such under-served communities can be partially neutralised with a smartphone and creative artifacts (Mihai, 2018; Mowat, 2015), as it appears is the case of these female filmmakers.

Moreover, some of the videos include a self or autoethnographic quality to the realm. Works made by Salvadorean female filmmakers show us details of their lives and household as well as the surroundings and everyday peculiarities of their villages. Observed perhaps as an ethnographic documentation it also defines an aesthetic image, just as Keep (2014) suggests—an aesthetics of unpretentious reality, distancing itself from the mediated and elaborated product from conventional filmmakers (Berry & Schleser, 2014).

These self-ethnographers most probably are not aware of the ethnographic quality of their videos but for the outsider it sure represents a challenge to the scholar interpretation of rurality and that of the commercial imagery of the Salvadoran gangster (Maras) world in urban settings. These rural female filmmakers challenge the discourse of the legacy media that portrays El Salvador as a gang ravaged country in need for a stronger military presence (Saca-Schader, 2015). Likewise, the “crisis of representation,” as described by Butz and Besio (2009), is defied with a smartphone camera where villagers in El Salvador and the Philippines narrate their own daily lives. This notion of independent self-imagery is very much in tune on how MacEntee *et al.* (2016) view smartphone filmmaking, or cellphilmaking (Dockney & Tomaselli, 2009), “as a tool that can combat the assumption that marginalized individuals need an intermediary to tell their stories or to help them do so” (MacEntee *et al.*, 2016, p. 8). It also reminds us of Cuban Julio García Espinosa's proposition of imperfect cinema away from the bourgeois cinema and theory of the late 1960s, argues Szita (2020). Not intended as artistic nor academic projects, some of these videos tell a story with some personal information enough to consider them very much in par with Dunn's and Myers' (2020) proposal of a contemporary digital auto-ethnography. More specifically, it is an auto-ethnographic filmography that takes relevance when we understand that GLMM results indicated that female filmmakers are more effective than males.

V. CONCLUSION

This research started with a question on what might be the variables that could explain higher viewership on a randomly selected group of mobile-phone videos from YouTube. One of the obvious advantages of inferential statistics is that it allow us to see associations and correlations that are not observable with descriptive statistics, let alone with the naked eye. A series of correlations between variables like gender of creator, language spoken, sub-genre, and length of the video showed to be more relevant than topic, and even country of origin to explain higher viewership. Furthermore, the results highlighted more specifically that subgenres like melodrama, action, and comedy stand out from the rest, regardless of the total number of views. Melodramas are more viewed when created by females just like comedies and action videos are more viewed when created by males. We can also see that Spanish, German, English and French language videos have more views the longer they are. Spanish, but above all German, language videos represent a small fraction of the total yet they are slightly more significant than those made in English language. A similar condition can be attributed to female filmmakers, even though a minority, they are more statistically significant than males. A synonym in laywomen's terms it means female filmmakers carry more clout or effectiveness. In this particular case, whether the female creator of melodramas is advancing the feminist agenda or simply supporting the status quo, it would be question to answer in future research.

This study's original contribution to current literature on new media is twofold. On one hand, because it approaches an eclectic, randomly selected group of mobile/smartphone videography using inferential statistics. This is the first time, as far as I am aware, that inferential statistics has been used in the scholarly discussion of cinematic arts. This approach allowed us to observe some social trends that parallels that of television and even cinema. On the other hand it elucidates the significance of female smartphone YouTubers from marginalised, rural, segments of the world population (Davis *et al.*, 2019). YouTubers that are not aware that their work goes against “the assumption that marginalized individuals need an intermediary to tell their stories or to help them do so” (MacEntee *et al.*, 2016). In conclusion, the results suggest that with the use of inferential statistics we can improve our understanding of a heterogeneous, non-canonized, videography/filmography generated with smartphone cameras. And, we can also make some observations about possible social connotations about the creators, like the highlighted case of marginalised female creators. Yet, there are plenty more that needs to be researched about this videography. Not only it merits the necessity to work with larger databases but also to explore the aesthetic as well as the socio-economic ramifications of this diverse and complex mobile and/or smartphone videography/filmography and its associated filmmakers.

CONFLICT OF INTEREST

Author declares that he does not have any conflict of interest.

REFERENCES

- Acosta-Alzuru, C. (2017). Unsettling a sacred relationship: The mother–daughter–man romantic love triangle in telenovelas. *Popular Communication*, 15(1), 1–18. <https://doi.org/10.1080/15405702.2016.1261141>.
- Anderson, L. W., Krathwohl, D. R., Airasian, P., Cruikshank, K., Mayer, R., Pintrich, P., Wittrock, M., et al. (2001). A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy. In Artz, A.F., & Armour-Thomas, E. (1992). *Development of a cognitive-metacognitive framework for protocol analysis of mathematical problem solving in small groups*. *Cognition and Instruction* (Vol. 9, pp. 137–175). New York: Longman Publishing.
- Atkinson, S. (2017). Mobile Cinema. *The Screen Media Reader: Culture, Theory, Practice*, 197–217.
- Baker, C., Schleser, M., & Molga, K. (2009). Aesthetics of mobile media art. *Journal of Media Practice*, 10(2–3), 101–122. https://doi.org/10.1386/jmpr.10.2-3.101_1.
- Balleys, C., Millerand, F., Thoër, C., & Duque, N. (2020). Searching for Oneself on YouTube: Teenage Peer Socialization and Social Recognition Processes. *Social Media and Society*, 6(2). <https://doi.org/10.1177/2056305120909474>.
- Berry, M. (2017). Making Films and Video Art with Smartphones. In *Creating with Mobile Media* (pp. 131–151). Springer.
- Berry, M., & Schleser, M. (Eds.). (2014). *Mobile Media Making in an Age of Smartphones*. *Mobile Media Making in an Age of Smartphones*. New York: PALGRAVE MACMILLAN. <https://doi.org/10.1057/9781137469816>.
- Brown, J. D. (2012). Sampling: Quantitative Methods. *The Encyclopedia of Applied Linguistics*, (noviembre), 1–6. <https://doi.org/10.1002/9781405198431.wbeal1033>.
- Burgess, J., & Green, J. (2009). You Tube's Popular Culture. In J. Burgess & J. Green (Eds.), *You Tube Online video and Participatory Culture* (pp. 38–57). Polity Press.
- Butz, D., & Besio, K. (2009). Autoethnography. *Geography Compass*, 3(5), 1660–1674. <https://doi.org/10.1111/j.1749-8198.2009.00279.x>.
- Caron, C., Raby, R., Mitchell, C., Thewissen-LeBlanc, S., & Prioletta, J. (2019). How are civic cultures achieved through youth social-change-oriented vlogging? A multimodal case study. *Convergence*, 25(4), 694–713. <https://doi.org/10.1177/1354856518795094>.
- Cochran, W. G. (1977). Sampling Techniques: third edition. In *Sampling Techniques* (pp. 1–500). John Wiley & Sons.
- Davis, H., Waycott, J., & Schleser, M. (2019). Digital storytelling: Designing, developing and delivering with diverse communities. In *Managing Complexity and Creating Innovation through Design* (pp. 15–24). <https://doi.org/10.4324/9780429022746-3>.
- Di Rienzo, J. A., Casanoves, F., Balzarini, M. G., Tablada, M., & Robledo, C. W. (2017). InfoStat. Córdoba: InfoStat Group, Universidad Nacional de Córdoba.
- Dockney, J., & Tomaselli, K. G. (2009). Fit for the small (er) screen: Films, mobile TV and the new individual television experience. *Journal of African Cinema*, 1(1), 126–132.
- Dunn, T. R., & Myers, W. B. (2020). Contemporary Autoethnography Is Digital Autoethnography. *Journal of Autoethnography*, 1(1), 43–59. <https://doi.org/10.1525/joae.2020.1.1.43>.
- Eagleton, T. (1996). *Literary Theory: An Introduction* (Second). The University of Minnesota Press.
- FAO. (2018). *Guidelines on defining rural areas and compiling indicators for development policy*.
- Galperin, H., Bar, F., & Nguyen, H. (2020). The power divide: Mobile communication in Los Angeles' Skid Row. *Mobile Media and Communication*. <https://doi.org/10.1177/2050157920932608>.
- Goggin, G., & Hjorth, L. (Eds.). (2014). *The Routledge companion to mobile media*. Routledge.
- Hilderbrand, L. (2018). The Big Picture: On the Expansiveness of Cinema and Media Studies. *Cinema Journal*, 57(2), 113–147. <https://doi.org/10.1353/cj.2018.0005>.
- Hoaglin, D. C., Iglewicz, B., & Tukey, J. W. (1986). Performance of some resistant rules for outlier labeling. *Journal of the American Statistical Association*, 81(396), 991–999.
- IBM. (2015). SPSS Statistics. IBM.
- Joye, S., Biltereyst, D., & Adriaens, F. (2017). Telenovelas and/as Adaptation: Reflections on Local Adaptations of Global Telenovelas. In T. Liech (Ed.), *Oxford Handbook of adaptation studies* (pp. 356–369). Oxford University Press (OUP).
- Keep, D. (2014). Artist with a Camera-Phone: A Decade of Mobile Photography. In M. Berry & M. Schleser (Eds.), *Mobile Media Making in an Age of Smartphones* (pp. 14–24). Palgrave Macmillan. <https://doi.org/DOI:10.1057/9781137469816.0001>
- Komori, O., Eguchi, S., Saigusa, Y., Kusumoto, B., & Kubota, Y. (2020). Sampling bias correction in species distribution models by quasi-linear Poisson point process. *Ecological Informatics*, 55(November 2019), 101015. <https://doi.org/10.1016/j.ecoinf.2019.101015>.
- Loertscher, M. L., Weibel, D., Spiegel, S., Flueckiger, B., Mennel, P., Mast, F. W., & Iseli, C. (2016). As Film Goes Byte: The Change From Analog to Digital Film Perception. *Psychology of Aesthetics, Creativity, and the Arts*, 10(4), 458–471.
- López, A. M. (2002). Our Welcomed Guests: Telenovelas in Latin America. In R. C. Allen (Ed.), *To be continued... : Soap Operas Around the World* (pp. 256–274). Routledge.
- MacEntee, K., Burkholder, C., & Schwab-Cartas, J. (2016). What 's a Cellphilm ? An Introduction. In K. MacEntee, C. Burkholder, & J. Schwab-Cartas (Eds.), *What's a Cellphilm? Integrating Mobile Phone Technology into Participatory Visual Research and Activism*. Rotterdam/Boston/Taipei: Sense Publishers.
- Malkowski, J. (2018). Against Expertise: The Current Case for Breadth over Depth. *Cinema Journal*, 57(2), 126–131. <https://doi.org/10.1353/cj.2018.0008>.
- Mihai, M. (2018). Epistemic marginalisation and the seductive power of art. *Contemporary Political Theory*, 17(4), 395–416. <https://doi.org/10.1057/s41296-017-0186-z>.
- Mowat, J. G. (2015). Towards a new conceptualisation of marginalisation. *European Educational Research Journal*, 14(5), 454–476. <https://doi.org/10.1177/1474904115589864>.
- Novakova, I., & Siepmann, D. (Eds.). (2020). *Phraseology and Style in Subgenres of the Novel: A Synthesis of Corpus and Literary Perspectives*. *World* (Vol. 3). Palgrave Macmillan.
- Open.ED@PSU. (2020). 12.6 - Reducing Structural Multicollinearity. Retrieved May 7, 2020, from <https://online.stat.psu.edu/stat501/lesson/12/12.6>.
- Pan, L., Li, Y., He, K., Li, Y., & Li, Y. (2020). Generalized linear mixed models with Gaussian mixture random effects: Inference and application. *Journal of Multivariate Analysis*, 175, 104555.
- Peters, C., & Allan, S. (2016). Everyday imagery: Users reflections on smartphone cameras and communication. *Convergence: The International Journal of Research into New Media Technologies*, 1–17. <https://doi.org/10.1177/1354856516678395>.
- Pieterse, J. N. (2019). *Globalization and culture: Global mélange*. Rowman & Littlefield.
- Prasad, S. E. (2017). *Creative Mobile Media: A Complete Course*. World Scientific Publishing Company.
- Redfern, N. (2012). Correspondence Analysis of Genre Preferences in UK Film Audiences. *Participations*, 9(2), 45–55.
- Reichow, D., & Friemel, T. N. (2020). Mobile communication, social presence, and perceived security on public transport. *Mobile Media and Communication*, 8(2), 268–292. <https://doi.org/10.1177/2050157919878759>.
- Rieser, M. (Ed.). (2011). *The mobile audience: media art and mobile technologies* (Vol. 5). Rodopi.
- Rios, S. (2017). Transnational Telenovela Remakes: Challenging Dominant Models and Old-Fashioned Heroines. *Critical Arts*, 31(5), 128–141. <https://doi.org/10.1080/02560046.2017.1401103>.

- Saca-Schader, E. M. (2015). *Coverage of the Gang Peace Process in El Salvador by El Diario de Hoy: Framing and Diffusion of Innovations Theory*. California State University, Fullerton.
- Schleser, M., & Berry, M. (2018). Introduction: Creative Mobile Media II—Making a Difference. In *Mobile Story Making in an Age of Smartphones* (pp. 1–7). Springer.
- Snickars, P., & Vonderau, P. (Eds.). (2012). *Moving data: The iPhone and the future of media*. Columbia University Press.
- Szita, K. (2020). New perspectives on an imperfect cinema: Smartphones, spectatorship, and screen culture 2.0. *NECSUS European Journal of Media Studies*, (Spring), 31–52. <https://doi.org/10.25969/mediarep/14317>.
- Upton, G., & Cook, I. (2008). *Oxford Dictionary of Statistics*. Oxford University Press (OUP).
- Waliaula, S. (2019). Televisual cinema and social identities: the case of Nollywood and Latin American telenovelas in Eldoret, Kenya. *Journal of African Cultural Studies*, 31(2), 180–195. <https://doi.org/10.1080/13696815.2018.1451747>.