

A TOURIST TALE OF FOUR CITIES ON INSTAGRAM

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ABSTRACT

Social media has become a basic source of information for visitors and its capacity to generate interest in tourist destinations is becoming more and more relevant. This paper identifies elements capable of generating greater user engagement with the official accounts of four European capitals with a high number of tourists: London, Paris, Berlin, and Madrid. Our findings, based on the 1152 posts published by these cities on their Instagram accounts over the course of a year, show how various aspects of the content of these posts are crucial factors in generating engagement. They also reveal the potential in including in posts variables with elements of interaction between users' content and official accounts. Moreover, the variables that may generate greatest engagement are identified, and both differences and illustrative similarities between the strategies implemented by the cities are noted. These results suggest not only interesting theoretical conclusions, but also important implications for the tourism sector.

Keywords: Instagram, engagement, social media, urban tourism, bandwagon effect, destination marketing organisations (DMOs).

1. Introduction

One of Charles Dickens's best-known novels, *A Tale of Two Cities*, set in the period of revolutionary turmoil in the late-eighteenth century, compares the atmosphere in two capitals, London and Paris. This article offers a comparative analysis of the promotion of tourism in four major European capitals, the two aforementioned cities plus Berlin and Madrid, in order to evaluate the strategies employed by their respective institutional tourism promotion accounts on Instagram. The criterion employed is the capacity to generate the greatest engagement among users of each city's account, understood here as the greatest number of interactions in the form of comments and likes.

Over the last five years, social media has grown enormously in terms of numbers of users. In 2019, users spent an average of 144 minutes per day on social networks, an increase of 2 minutes compared to the previous year (GlobalWebindex, 2019).

In the case of the tourism industry, social media is particularly important for its capacity to generate interest in a destination and, consequently, for its potential to become an important tool to complement those conventionally used in tourism marketing (Barbe et al., 2020). Its influence is such that social networks are changing the way in which consumers search for information before, during and after their trips (Uşaklı et al., 2019, Assaker et al., 2020). And if that is what actual and potential visitors to a city are doing, then destination marketing organisations (DMOs) are forced to review their marketing strategies, adapting their channels and forms of promotion to new patterns of behaviour (Jeon et al., 2017; Dogra et al., 2020; Iglesias-Sánchez et al. 2020). Studies have been carried out on the impact of different social networks on tourism: Facebook (Mariani et al., 2018; Önder et al., 2019); Twitter (Provenzano et al., 2018); Instagram (Acuti et al., 2018; Barbé et al., 2020); YouTube (Arora et al., 2020); and so on. However, among all the different social networks, this study focuses its analysis on Instagram as the platform that has acquired the most followers in recent years and one that has a very high growth rate. In 2018, nearly 714 million users accessed the platform monthly, and this figure is expected to reach over 989 million by 2022 (Statista, 2019). Besides the interest of this social network due to its high number of followers, extraordinarily rapid growth in recent years and enormous potential for further growth, Instagram is a platform where image plays a central role, and image is also an essential element in the tourist industry (Balomenou and Garrod, 2019).

This research examines the levels of engagement generated by the official Instagram accounts of the tourist offices of four European cities: Berlin (@visitBerlin); London (@visitlondon); Madrid @visita_Madrid); and Paris (@parisjetaime).

The main objective of this research is to quantify and analyse Instagram users' interactions to determine the effectiveness of their engagement. To this end, our research presents an integrated approach (identifying up to 20 variables) that allows us to evaluate, using statistical modelling, the interactions in the form of comments and likes received by all the posts published during the year (not just a sample) by the official accounts mentioned.

Our analysis allows us to evaluate the effectiveness of different content strategies, with implications for the brand definition and identity that each tourist destination aims to offer (Frias et al., 2020). This work not only explores more deeply the roles of different types of content, but it also incorporates additional dimensions, such as: the use of posts as more explicit forms of advertisement; another aspect that is becoming increasingly important: the role of interaction with users, which this work examines using a commonly-used indicator (the ability of posts that use

their own users' content to induce to invite greater engagement); and a new dimension regarding whether the number of followers of the content authors (from "re-posts") affects engagement in posts, something which has been described as the bandwagon effect.

The analysis is based on encoding a series of variables, classified into three categories. The first category concerns the general type of content; the second, advertising and/or direct sales activities of services and establishments; finally, the third is concerned with aspects of interactivity (in addition to the generation of comments/likes). The latter category includes posts that explicitly invite feedback or repost photos from other Instagram users' accounts: this latter case opens up the question as to the extent to which the number of followers of accounts from which photos are reposted exercise a greater "bandwagon effect", generating more interactions with a city's official account.

This study examines the characteristics of all the posts over the course of a year on the official Instagram accounts of four European capitals, evaluating their ability to generate engagement based on the variables present in them. The number of comments and likes associated with the posts is used as an indicator of engagement, which allows comparability between different accounts. This way of measuring engagement is present in the literature applied to different sectors (Bonilla et al. 2020; Rietveld et al. 2020). In it, the similarities detected, signalling robust aspects of impact, are as significant as the differences between cities, which may be the result of different strategies and/or specific differences in the image/brand of each city. In any case, the implications for the management of tourism images and promotion policies are clear, opening up the way both to benchmarking and determining relevant aspects for exploiting the respective city brands. This question has a renewed interest in post-Covid-19 times, after the dramatic hit to tourism, which makes it even more important to be selective and accurate in the messaging and strategies in recovering the interest of potential visitors.

2. A selective review of literature: theoretical and empirical underpinnings of hypotheses

Our article engages with two lines of research: firstly, the role of social networks, especially Instagram, as a tool for promotion of tourism; and, secondly, an analysis of ways of achieving increased engagement among social media users by encouraging a higher number of responses. Here follows a brief summary of the aspects of the literature related to our study.

2.1. Social media as a tool for tourism promotion

As noted in the introduction, social media has greatly altered the habits of users in many fields of activity, and tourism is, perhaps, one of the most affected by this (Yi et al., 2021; Dogra et al., 2020; Barbe et al., 2020): gathering information before choosing tourist destinations is a behaviour that is becoming increasingly widespread among travellers, who also use their visits to generate content about those same destinations, increasingly recounting their experiences on the networks by sharing text-based and graphic messages (Klostermann et al., 2018; Capolupo et al., 2020). The growing realisation of DMO managers regarding the central role played by the image of tourist destinations in decisions taken by potential customers makes it essential to focus on how that image is shaped and how tourist destinations are perceived (Choi et al., 2007, Molinillo et al., 2018), which is becoming a way for destinations to “speak for themselves” (Vinyals-Mirabent et al., 2019).

Constructing a brand image requires interaction between efforts to strengthen the elements that form its identity or personality *and* its recognition by users, in a process that can be defined as circular and dialogue-based (Chen et al., 2018; de la Rosa et al., 2019; Yu et al., 2020;). Social networks have unique potential in this regard, and for this reason identifying the elements of interactivity that contribute to these brand images has become an active field of research. The powerful emergence of various social networks has generated studies on each of them. To cite just one recent study referring to each social network, Giglio et al. (2019) focus on Flickr, Mariani et al (2018) on Facebook, De la Rosa et al. (2019) on TripAdvisor, and Acuti et al. (2018) on Instagram. This article is based on our study of Instagram, a social network whose use is becoming increasingly widespread and which makes it possible to analyse interesting elements in a form of interactivity which, as mentioned, is key to the dialectic between the creation of a destination brand image and the capacity to attract interest among users of the network and potential customers. Certain analyses that are relevant to important themes in our paper highlight more symbolic or iconic factors, an idea closely linked to references to “authenticity” (Chen et al., 2020; Rather et al. 2019), to “city brand personality” (Priporas et al., 2019), or the “feeling” of a destination (Deng and Li 2018) but also to more functional or operational types.

Stepchenkova and Zhan (2013), Michaleidou et al. (2013) and Mak (2017) offer an interesting comparison between the posts of tourists on social networks and the images of the official accounts, and their implications. As explained below, the current practice of re-posting users’ photos in official accounts is a “bridge” between both —user and official— sources. The well-known role that users’ views play in tourism planning and management (Huerta-Álvarez, et al., 2020; Balomenou and Garrod, 2019) has been intensified by growing competition among tourist

destinations, particularly in a European context in which destinations need to strengthen their position in response to the rise of alternatives (Mariani et al., 2018). **Bonilla et al. (2021) develops these lines of analysis for the case of a European capital city.** Moreover, due to the coronavirus crisis, these views are likely to play a key role once more when it comes to reviving one of the sectors worst affected by the pandemic.

All this generates lists of “ingredients” or variables that should be taken into account and which have been applied in such studies of cities as those by Kladou et al. (2016) and the aforementioned Choi et al. (2007), Stepchenkova and Zhan (2013), Mak (2017) and De Rosa et al. (2019). As explained below, in this paper we adapt these approaches according to the specific nature of our goal of comparing the Instagram accounts of the four aforementioned European capitals.

2.2. Engagement of Instagram tourism consumers

The idea of engagement is a particularly multi-faceted concept, having been studied in a broad range of fields, from psychology and sociology to patterns of behaviour in organisations and marketing. **A broad definition is “the attitude, behavior, the level of connectedness among customers and the firm” (Kumar and Pansari, 2016).** A classic reference is Hollebeek et al., 2014, which highlights the combination of cognitive, emotional and behavioural aspects and **(see also Rather and Hollebeek, 2018; Gupta et al., 2018)** the latter being highlighted in a particularly relevant study by Romero, 2018 relating to tourism. **Furthermore, in** a broad sense the notion of consumer engagement refers “to ways in which customers can contribute to company results through mechanisms other than purchases” (Romero, 2017). In this latter field, capturing customer attention paves the way to obtaining their engagement. Studies of engagement in marketing include those by Ahn and Back (2018) and Bonilla et al. (2019). These analyses are of particular interest when they are applied to tourism, as is the case of Bravo et al. (2019), Kanje et al. (2020) and Moro and Rita (2018). One question that remains open is how to measure that engagement. Different methods of classification have been proposed that include the cognitive, emotional and behavioural dimensions (Vivek et al. 2014) to which we can add, in other studies, the functional and innovative dimensions (Carlson et al., 2019). A particularly open approach is that taken by Parihar and Dawra (2020). Other studies focus on visual dimensions based on the power of the image (Mariani et al., 2018), which is a particularly important aspect on Instagram.

Our study aims to contribute to filling the gap pointed out by Rather in several aspects and Hollebeek (2021): “Though customer engagement (and experience) are important research priorities, empirically derived insight into these concepts...remains scarce”. On the one hand, it

is based on some of the categories indicated in several of the works that have been cited—and those indicated in the presentation of the hypotheses— on the capacity to induce responses that are indicators/symptoms of engagement, but our paper offers an integrated formulation, with a common statistical methodology, to incorporate both elements of content and advertising or aspects of interactions between DMO posts and users: it represents, therefore, an operational formulation that highlights the channels of interactions generated by social networks (Gálvez-Rodríguez et al., 2020). On the other hand, most of the studies refer to a destination, a specific tourism market, while our paper introduces a comparative methodology that allows us both to detect common elements and identify specific features associated with the characteristics or “personality” of each destination—aspects highlighted in Gupta et al. (2018, Kumar and Pansari (2016) or Hollebeek (2018)— to assess both the most generic and the most idiosyncratic components in their ability to induce user responses. On the other hand, although the notion of engagement is very broad and multifaceted, in order to facilitate its quantification and comparability between the official accounts of cities, we have opted to focus on the numbers of likes and comments generated by the presence of certain characteristics in posts (as compared to their absence) as indicators of engagement. Accordingly, a specific dimension of our paper is the combination of the characteristics of posts with the aforementioned capacity to inspire or generate interaction in the form of comments or likes. More specifically, given the different types of engagement implied by these two forms of response—likes being more immediate and emotional, and comments more elaborate and evaluative—the two categories are differentiated throughout the paper (John et al., 2017). An additional feature is that our study is not based on a sample of posts or on a survey but on the analysis of all interactions triggered by all posts in the course of one year of the official Instagram accounts of the 4 cities analysed.

2.3. Development of hypotheses

Content offered on Instagram is relevant in evaluating user engagement since image is the principal element of the platform. Developing content capable of connecting with the interests and motivations of the followers of an account is essential if the aim is to increase their engagement and expand the network of followers and online impact (Barbe et al., 2020). Providing enjoyable, attractive content that is perceived as entertainment can be decisive for generating engagement (Rietveld et al., 2020).

H1. Different image content leads to different levels of engagement.

The justification of this hypothesis relating to the impact of the content is based on the identification of 14 variables based on our adaptation of earlier studies by Choi et al. (2007), Stepchenkova and Zhan (2013) and Mak (2017) (see Table 1).

[INSERT TABLE 1]

Analysis of the content of the posts enables us to formulate the following hypothesis:

Another important consideration regarding posts from the official account of a DMO concerns those that introduce elements of publicity, including advertising for particular establishments in a city in a direct and explicit way and with commercial purposes. We describe four variables within this category: Advertising for shopping centres; Advertising for hotels; Advertising for restaurants; and Other advertising. The presence of these variables is noted when the photos in posts are taken in shopping centres, hotels, restaurants or other advertised spaces and the text makes direct or indirect reference to the space (Johnson et al., 2019; Gaber et al., 2019). All this enables us to formulate a second hypothesis:

H2. The inclusion of **advertising** elements affects user interactions.

Regarding the role of interactions between users, much of the literature has focused on how the presence of influencers on Instagram could play a leadership role over other users (Casaló et al., 2020; Femenia et al., 2020). This study also introduces a new element in its proposal to make the first attempt in the literature to analyse the “bandwagon effect” in terms of engagement associated with posts originating in images by other users. This interaction complements the interaction that DMOs explicitly try to elicit when they request feedback from users or when they contain photos from the accounts of other users, regardless of the number of followers they have. To this end, posts published by the four accounts were encoded according to whether or not the following variables were present: Feedback, when the text accompanying the post expressly invites users to provide a response on some issue; and users’ photos, content in which a photo from another user’s account is reposted.

These variables are those that most explicitly involve or invite interactions between users and the official account, generating what we call the bandwagon effect among users with different levels of presence on the network —here the question is whether the number of followers of the account from which the photo is reposted is significant in generating more interactions with the

official account that reposts it— and overall engagement from others. This leads us to two new hypotheses, one referring to interaction variables as a whole (H.3), the second (H.4) to the role of the bandwagon effect, broken down into the capacity to generate more likes and comments.

H3. The presence of variables of interaction generates more engagement.

H4 a) Reposting photos by users of the network creates a bandwagon effect, generating engagement in the form of likes.

H4 b) Reposting photos by users of the network creates a bandwagon effect, generating engagement in the form of comments.

As previously mentioned (John et al., 2017), the user interactions analysed in this study are likes (which reflect, generally speaking, a more “impulsive” response) and comments (which require a certain degree of elaboration and/or thought). Based on this, **a final hypothesis is formulated:**

H5) Some of the variables defined (content, advertising, interaction) induce asymmetric responses in likes and in comments.

Taken together, the hypotheses formulated enable us to clarify relevant aspects with potential effects, thereby helping to inform strategies for the presence of tourist destinations on the social networks. Figure 1 summarises the proposed research model.

[INSERT FIGURE 1]

3. Method

For the purposes of this analysis, *all* 1152 posts published by the four cities included in the study on their respective official Instagram accounts, @visitberlin, @visitlondon, @visita_madrid and @parisjetaime, from 1 January to 31 December 2018, were encoded: Berlin (279 posts), London (427), Madrid (117) and Paris (329). This encoding identified the comments and likes associated to each post according to the presence or absence of the different variables, grouped into four categories, as described in the previous section.

To ensure that the data was encoded at a point after the date of publication of each post that allowed sufficient time to reflect the maximum number of interactions possible and that patterns of time or order of publication during the day did not influence the observations made, data gathering began on 1 September 2019.

From the number of likes and comments of each post and its assignation to one (or more) categories, a statistical study has been carried out of the results associated to the presence (or absence) of each of the categories or dimensions shown in tables 2–4. The analysis showed the degree to which such a presence is associated statistically to significant differences in the number of likes and comments generated, and if this difference was positive (the presence of the variable generated more interactions) or negative (fewer interactions). The following tables identify with a ‘+’ or a ‘-’ these results, in which three levels of statistical significance have been distinguished, according to the ability of the presence of a variable to generate differences as opposed to the posts in which the variable was absent.

Although new updates on social media allow other interactions, such as share, save, etc., in this paper we have used the two basic measurements of engagement: likes and comments, which supposes a limitation on the analysis, which leaves complementary research questions for further development in the future. Comments and likes are data available publicly and represent a starting point for identifying the aspect of posts that generate differences in engagement and establish comparisons between accounts and other social media.

Counting these responses is the method most commonly used to measure the level of user engagement (Sabaté et al., 2014; Lee et al., 2018). Simultaneous consideration of these two interactions enables a complementary formulation that enriches the analysis, because, as mentioned, likes are a more immediate, impulsive response, while comments imply a greater degree of engagement, requiring more elaboration.

The previous section describes the classification according to which each post was encoded by determining the presence or absence in it of each of the variables defined while at the same time counting the number of reactions in the form of comments and likes generated. We should note that, in the case of comments, these reactions were merely counted, without analysing any feelings or opinions that they implied, although this could be the subject of future research.

To carry out this encoding, a group of three people not part of the research team was selected and trained. Once all the information had been gathered, an Inter-Coder Analysis was conducted to verify the reliability of the encoded data. The Scott’s Pi and Cohen’s Kappa coefficients, which compare the encoded data with the values if obtained randomly, were measured. As there is no standard for the number of cases to be encoded when intercoder reliability is applied, it was applied to 50 analysis units, in all cases producing values of over 0.80, and in most cases a value of 1. This was the result expected in all the more descriptive variables with little or no need for

subjectivity in their evaluation. Figure 1 shows an example of a post from the official Instagram account of Paris (@parisjetaime). The post was published on 18 October 2018 and classified by support variables as: Photo reposted from a user; Number of followers of user reposted; 36,300; Content variables: Religious architecture; Interaction variables: Feedback.

[INSERT FIGURE 2]

To ensure the maximum reliability of the conclusions, the data was initially processed by bivariate analysis of the impact that each variable generated in terms of comments and likes. The encoded data was then processed again by multivariate analysis to obtain maximum information and generate the most reliable responses to the research questions.

Our approach is based on the important contributions made to date in the literature and starts from a selection of variables already used therein. However, this work presents an integrated framework focused on using statistical analysis and employs a strategy which, to some extent, could be characterised as “Let the data speak for itself”, which is complementary and, in some way, parallel to the cited “Destinations speak for themselves” which describes the power of images, especially on Instagram and social media. Using the power of images and data speaking for themselves is the way in which we would describe the contribution of our paper.

4. Results

4.1. Analysis of content variables

Table 2 shows the results of bivariate analysis applied to the content variables, for which some results were as expected. These include the positive impact of the presence of the most-visited places, the most iconic tourist assets of each city, according to the recommendations included in the official sources of each city: visitberlin.de, parisinfo.com, esmadrid.com and visitolondon.com.

[INSERT TABLE 2]

These generate more likes in Berlin, Paris and London, and more comments in the German capital, in all cases with high or intermediate levels of statistical significance. Another important variable concerns posts that reproduce nightlife images. These seem to generate significantly more likes and comments in the case of Berlin, Madrid and London, with intermediate or high levels of significance. Other variables that have a positive impact are panoramic views in Berlin and Paris and public streets in Berlin, Paris and Madrid. In the case of London we can highlight the positive impact generated by images of tourism facilities and infrastructure, another emblematic point of reference in the British capital. Another variable that makes a difference is the presence of alternative art in posts. This presence generates more comments in the case of Berlin and fewer likes in the case of London. This goes some way to confirming the image of Berlin as the “capital of alternative art” in Europe according to the perception of the city’s followers on its official Instagram account. For posts featuring civil architecture, the positive impact in terms of likes for Berlin and the negative results in the case of London reflects another asymmetry between the two capitals. One aspect that should be interpreted with care is the content of posts featuring the museums/exhibitions/theatres variable. Such posts generate significantly fewer likes in the cases of Berlin and Paris. One possible explanation for this negative result may be that users interested in such cultural assets are less given to expressing themselves and/or that they are more interested in receiving information than in responding to posts that contain references to museums and so on.

4.2. Analysis of advertising variables

Table 3 shows the results for content with advertising variables, revealing interesting differences between the cities. In the cases of Berlin and Madrid, the impact is negative, as generally occurs with posts devoted to providing information, while in the case of London the effects are positive.

[INSERT TABLE 3]

The image of London as a shopping city is confirmed to a certain extent, as users respond with more interactions in the form of comments and likes to posts more explicitly aimed at sales. Also interesting are reactions to posts linked to restaurant offerings. These generate fewer likes in the case of Berlin and Madrid, but more comments (a more “elaborate” form of interaction than likes) in the case of Paris. This is possibly due to the image of the French capital as a leading centre for cuisine. The same is true of Madrid. Hotel advertising generates fewer interactions in both Paris and London. It is notable that not all the accounts advertise the same items. For example, in the case of Berlin there are no observations of sales referring to either hotels or shopping centres.

4.3. *Analysis of interaction variables*

Table 4 shows the results of variables that involve some element of additional interaction beyond a simple like or comment. Posts that invite more explicit feedback generate more of both types of interactions in the case of Berlin, as well as more comments in the case of London. Another relevant dimension regarding the engagement of Instagram users is the inclusion of photographs on institutional accounts.

[INSERT TABLE 4]

The practices of official city Instagram account managers are quite heterogeneous in this respect. For instance, with regard to reposting photos from users' accounts, Paris and London do so very frequently, while Berlin did so once a week in 2018 and Madrid only very occasionally (just eight times in 2018, for which reason no analysis of this was conducted). Accordingly, an initial aspect for evaluation is to what extent those "borrowed" photos generate more interactions. All impacts (likes and comments in all four cities) are affected positively, though with particular statistical significance in the case of Berlin.

Another aspect highlighted in this paper is the discussion as to whether a "bandwagon effect" is created by the followers of the original account posting a photo and the interactions generated thanks to its publication on the official account: is there an "influencer impact", which would occur if a repost of content by users with more followers generated more interactions on the official account, or does this effect not occur? Table 5 summarises the Spearman correlation coefficients between the number of likes and comments generated by photos from other users reposted on the official account and the number of Instagram followers of the users who originally posted the photo on Instagram.

[INSERT TABLE 5]

Figures 3 and 4 present, in graph form, the data referring to London and Paris, respectively. In the case of Paris, the coefficients are positive with a certain degree of significance, while in the case of London the coefficients are low (but positive). Finally, in the case of Berlin there is a slight positive correlation in terms of likes, but this correlation is negative in terms of comments. This asymmetry supports the decision to differentiate between hypotheses H4a and H4b.

All this is aimed at resolving the question of the role of these potential “bandwagon effects”, which must remain ambiguous for the time being, with great differences between cities, and opens up the possibility for more detailed research into the potential of this channel for interactions on Instagram. In any case, any possible “influencer impacts” are linked to “superstars”, who use different channels to those used by the four cities’ official Instagram tourism accounts.

Figure 3 shows the correlation between the number of followers of users whose photos are reproduced and the number of likes and comments generated for the city of London.

[INSERT FIGURE 3]

Figure 4 shows the correlation between the number of followers of users who take photos and the number of likes and comments generated for the city of Paris.

[INSERT FIGURE 4]

The results of this first study of “bandwagon effects”, despite the differences between cities and a certain degree of asymmetry between likes and comments, suggest that this is a subject that requires and merits more research. These results could be explained by affirming that the intrinsic merit of a photo carries more weight than the online popularity of the person who took it. However, it could also be argued that, even though the official account has reproduced photos posted by users with large numbers of followers, no social media *superstars/influencers* are detected among these authors, who probably exert their much-sought-after influence in other ways (Femenia-Serra and Gretzel, 2020).

4.4. *Multivariate analysis*

The results from the multivariate analyses ratify, and on occasion modulate, those obtained from the bivariate analyses. Table 6 summarises the most significant variables according to the results of multivariate analyses (applied to all variables with a $p < 0.1$ in the bivariate analysis), indicating both how they affect comments and likes, positively or negatively, in each of the four cities and, with the number *, the degree of statistical significance of each variable. Three levels

were used for statistical decisions: the most demanding with a value of $p < 0.0001$ (designated by ***p); an intermediate level associated to $p < 0.05$ (represented as **p); and a third, weaker but still relevant level, with $p < 0.1$ (denoted as *p).

[INSERT TABLE 6]

5. Discussion

Analysis of the results obtained from this study enables us to respond to the hypotheses posited in the research model. The systematic formulation of the impact of the 20 variables also allows us to discuss areas where each of these variables coincide or differ in generating comments and/or likes for each city, as well as looking at how the impact varies across the four cities analysed.

Firstly, as regards the question of which categories of posts generate the most user engagement, our study identifies those items whose presence significantly helps to generate the greatest response in terms of likes and comments. H1, on the impact of certain content on user interaction, is confirmed. Our study is in line with the results of Choi et al., 2007 and Stepchenkova et al., 2013, although the contribution of this work allows for a broader, more precise comparative analysis: particularly significant are the cases of variables which generate a positive impact for all four cities, in terms of both comments and likes. These include the presence of parks and gardens, public streets, people and residents, most visited, and nightlife photos. We should also take particular note of the variables that generate negative impacts for all four cities and for both likes and comments: the presence of information and civil architecture. Other variables produce results that vary from city to city. For example, photos of panoramic views of the city generate positive results in terms of likes for all except London, where this type of post generates a negative impact. Moreover, a negative impact is generated by the presence of museums/exhibitions/theatres in all cities with the sole exception of London.

H2 is confirmed, with responses varying from city to city. A clearly negative impact is observed in the case of Berlin, where posts that include more explicit or direct publicity generate less interaction among followers, while, in the case of Paris, a positive impact is observed in the case of restaurants. This disparity between cities might be explained by the different interests that users pursue when following each of the different official accounts. The results of this research confirm users' misgivings about advertising messages presented as informative, thus qualifying the results of Gaber et al., 2017 and Chen et al., 2019, although our work points out the specificity

of the aforementioned result for Paris for the restaurant variable, as well as the unique result explained in the previous paragraph about museums/exhibitions/theatres in London. This is indicative of the strategic role of variables as they relate to the personality of the capitals studied.

The confirmation of H3 is also noteworthy, with a resoundingly positive result for all four cities when they repost photos from followers of official accounts, achieving the best results in terms of both likes and comments. Also confirmed is the significance of the analysis as to whether the number of followers of users whose photos are reposted has an effect. In other words, whether users with larger numbers of followers create more of a bandwagon effect and generate greater engagement than those with fewer followers. For this reason the responses to H4a and H4b should be seen in the light that, while reposting photos from users' accounts generates a clearly positive impact, the fact that the users themselves have many followers seems to play the role of a catalyst, generating more interactions, proportionally, in the case of Paris, the city that uses such reposts most. However, the same is not true in other cases. Also notable is the asymmetry between likes and comments observed in the case of Berlin. Many studies have analysed the effect and reach of influencers over their followers in different dimensions (Khamis et al., 2017; Erz et al., 2018; Ge and Gretzel, 2018; Casaló et al., 2020). However, their ability to generate perceptions and intentions to visit tourist destinations is a field of study that is just beginning to open up (Chatzigeorgiou, 2017; Ong and Ito, 2019). Moreover, although there have been positive experiences regarding the use of influencers by DMOs (Barbe et al., 2020), the fact that influencers were not selected in this case produced different results.

In all the foregoing analysis we have already pointed out the various impacts on comments and likes, but an added value of our study is that the results of the bivariate analysis have been complemented with the multivariate study whose main results and conclusions are presented in table 6 and which ratify **hypothesis 5**. In particular, on some occasions the variables that generate the most interactions give rise to similar results of more impulsive responses in the form of likes and more elaborate responses in the form of comments. However, in other cases there are significant differences between the two types of response (Jonh et al., 2017). Reflecting the analysis described in the previous section, Table 6 lists all the variables with positive and negative impact for both types of intervention. In it, we can observe the differences between cities and the parallels between impacts on likes and comments.

6. Managerial implications

The different cities must produce more proactive and interactive strategic content plans in order to benefit the most from social media as a new and essential marketing tool, especially in the current global context in which winning back tourists after 2020 has become a key aspect of the economic recovery. The asymmetries identified in the different types of content to generate engagement reveal a path to selecting images and content that results in greater engagement.

The divergence in the degree of response and different typologies of the post contribute to outlining with more precision a communication strategy, highlighting the aspects that better contribute to define the “personality” of the city.

One aspect that deserves particular attention due to the more direct implications it has for businesses is the role of tourism accounts used as tools for more direct advertising of certain establishments and services. The results are ambiguous: in some cases users seem to distance themselves from this “commercial” goal, while in others in which the target is well selected, such as the status of London as a shopping city or Paris as the capital of cuisine, the results are positive. This introduces aspects of complementarity between this dimension of the use of Instagram accounts and other channels for promoting aspects of a city’s tourist image.

Also interesting is the evidence of channels that take fuller advantage of Instagram’s potential for interactivity. Firstly, by making greater use, as some cities do, of the possibility of encouraging user feedback. And, secondly, by involving the network of users by reposting photos originally posted by them (in addition to those provided by the institution). In these cases, generally speaking, the “bandwagon effect” is more the result of being a fellow user of Instagram than a user with a particularly high number of followers: there are aspects of social media that polarise to the advantage of major “influencers”, but there are also others, as seems to be the case here, in which the network “democratises” contributions. In view of the differing degrees to which the cities use these dimensions that encourage greater interactivity, one recommendation would be for them to make increased use of them, based on the experience of the most successful accounts.

Accordingly, this study for managing Instagram accounts by DMOs suggests significant practical implications. Like other studies (Barbe et al., 2020), our analysis confirms the usefulness and sensitivity of Instagram as a key tool for tourism promotion and marketing. Our study also points to channels that could be used more intensively with the aim of generating greater engagement in the form of more interactions, measured in terms of likes and comments. This suggests the possibility of creating a community of users willing to share photographs of the city

without the need for these to be prominent influencers, with the aim of focusing on the intrinsic quality of posts related to the city. Efforts should focus on achieving more engagement through content that generates significant responses, such as promoting the most visited places and other variables linked more specifically to each city. The disparate results for advertising can be explained by the characteristics specific to each city and the different interests each awakens among its followers on social media. One area worth discussing would be how to increase the attractiveness of museums, exhibitions and theatres featured on Instagram so that they acquire greater prominence among the tourist assets of a city.

7. Conclusions

The analyses conducted enable us to determine what aspects of the official tourism Instagram accounts of four major European capitals generate the most user interactions in terms of likes, a form of response that, as we have made clear throughout this paper, can be considered more spontaneous, impulsive, and comments, a type of response which requires more time and is rather more elaborate. The effects of three categories of variables were studied: content, advertising and interactions, with results that reveal both common patterns and asymmetries among the four cities. Both the similarities and the differences enable us to draw conclusions with regard to management of strategies and policy for promoting tourism.

Among the content variables, the role of “sure assets” is consolidated, unsurprisingly. These are the most iconic sites, those best-known and most visited in each city, places that generate considerable interaction. The positive results obtained by nightlife photos are also worth highlighting, suggesting that the rest and relaxation/leisure component may attract potential tourists. The results for other variables, such as civil architecture and museums/exhibitions/theatres, were more ambiguous, lending weight to the suspicion that the way they are managed has room for improvement. The role played by iconic tourism facilities and infrastructure in the city of London (buses and the underground) suggests that operational aspects of cities can be just as appreciated as their more aesthetic attractions.

Among the relevant theoretical or analytical aspects that emerge from our work, we can highlight, therefore, the reinforcement of the selective role of content, especially content most closely linked to the personality, idiosyncrasy and brand image of each of the cities. On the other hand, our study also ratifies the need for caution in the use of variables that the user may directly or indirectly perceive as commercial advertising beyond informational content or content appealing to tourists. Likewise, another analytically relevant result is the advisability of exploring

in greater depth the role of content generated by other users: although it is true that our research does not present conclusive results regarding the bandwagon effect, nor does it allow us to rule it out either, and calls for more selective behaviour in this regard on the part of those responsible for official accounts —possibly linked to the selective role of content already mentioned— in order to improve use of these elements of interactivity with other users. And finally, from a theoretical point of view, we would like to point out that the statistical analysis method we have used has allowed for an integrated treatment of variables of a very diverse nature that are usually analysed separately.

Limitations and future research

Despite the significant results returned by this study, its limitations should also be noted. Firstly, it might be useful to expand observations to span more years in order to corroborate the results and analyse their evolution. It would also be interesting to increase the number of cities studied and to make comparisons between different cities in the same country. Similarly, it would be particularly interesting to extend the study to other social networks, such as Facebook or Twitter. Although these platforms focus on very different aspects, comparing them all could cast light on important issues concerning the engagement of followers of different cities. The findings referring to advertising have practical and useful implications that would require further study to achieve better assessment. Likewise, as already mentioned in the text, our study uses only two engagement indicators —comments and likes— in order to facilitate quantification and comparability of results between different cities; one line of expansion and improvement would be to include other forms of interaction increasingly allowed on social networks. Finally, the study opens up promising lines that require more research. These include, for instance, the role of the “bandwagon effect” discussed in this paper, and the impact on engagement of the use of different hashtags by analysing each one included in posts. These two lines of research both share the aim of finding ways to make the most of the opportunities provided by the network for interactivity and interconnection.

References

Acuti, D., Mazzoli, V., Donvito, R., and Chan, P. (2018) An Instagram content analysis for city branding in London and Florence. *Journal of Global Fashion Marketing* 9(3): 185-204. <https://doi.org/10.1080/20932685.2018.1463859>

Ahn, J., and Back, K. J. (2018) Antecedents and consequences of customer brand engagement in integrated resorts. *International Journal of Hospitality Management* 75: 144-152. <https://doi.org/10.1016/j.ijhm.2018.05.020>

Arora, N., and Lata, S. (2020) YouTube channels influence on destination visit intentions. *Journal of Indian Business Research*. <https://doi.org/10.1108/JIBR-09-2019-0269>

Assaker, G., Hallak, R., and El-Haddad, R. (2020) Consumer usage of online travel reviews: Expanding the unified theory of acceptance and use of technology 2 model. *Journal of Vacation Marketing* 26(2): 149-165. <https://doi.org/10.1177/1356766719867386>

Balomenou, N., and Garrod, B. (2019) Photographs in tourism research: Prejudice, power, performance and participant-generated images. *Tourism Management* 70: 201-217. <https://doi.org/10.1016/j.tourman.2018.08.014>

Barbe, D., Neuburger, L., and Pennington-Gray, L. (2020) Follow Us on Instagram! Understanding the Driving Force behind Following Travel Accounts on Instagram. *E-review of Tourism Research* 17(4).

Bonilla, M., Del Olmo, J. L., and Andreu, D. (2019) The interaction of Instagram followers in the fast fashion sector: The case of Hennes and Mauritz (HandM), *Journal of Global Fashion Marketing* 10 (4), 342-357. <https://doi.org/10.1080/20932685.2019.1649168>

Bonilla, M., Del Olmo, J. L., and Andreu, D. (2021). Insights into user engagement on social media. Findings from two fashion retailers. *Electronic Markets*, 31(1), 125-137.

Barbe, D., Neuburger, L., & Pennington-Gray, L. (2020). Follow Us on Instagram! Understanding the Driving Force Behind Following Travel Accounts on Instagram. *E-review of Tourism Research*, 17(4).

Bravo, R., Catalán, S., and Pina, J. M. (2019). Intergenerational differences in customer engagement behaviours: An analysis of social tourism websites. *International Journal of Tourism Research*. <https://doi.org/10.1002/jtr.2327>

Capolupo, N., Giampaola, V., and Piscopo, G. (2020) The 'Dark Power' of Instagram: Prospects and Threats for Tourism Organisations. *International Journal of Islands Research* 1(1): 7.

Carlson, J., Rahman, M. M., Taylor, A., and Voola, R. (2019) Feel the VIBE: Examining value-in-the-brand-page-experience and its impact on satisfaction and customer engagement behaviours in mobile social media. *Journal of Retailing and Consumer Services* 46: 149-162. <https://doi.org/10.1016/j.jretconser.2017.10.002>

Casaló, L. V., Flavián, C., and Ibáñez-Sánchez, S. (2020) Be creative, my friend! Engaging users on Instagram by promoting positive emotions. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2020.02.014>

Casaló, L. V., Flavián, C., & Ibáñez-Sánchez, S. (2020). Influencers on Instagram: Antecedents and consequences of opinion leadership. *Journal of Business Research*, 117, 510-519. <https://doi.org/10.1016/j.jbusres.2018.07.005>

Chatzigeorgiou, C. (2017) Modelling the impact of social media influencers on behavioural intentions of millennials: The case of tourism in rural areas in Greece. *Journal of Tourism, Heritage and Services Marketing* 3(2): 25-29. <https://doi.org/10.5281/zenodo.1209125>

Chen, N. C., Dwyer, L., and Firth, T. (2018) Residents' place attachment and word-of-mouth behaviours: A tale of two cities. *Journal of Hospitality and Tourism Management* 36: 1-11. <https://doi.org/10.1016/j.jhtm.2018.05.001>

Cheng, F. F., Wu, C. S., & Chang, Y. T. (2019). Negative influence of advertisement on Instagram: the moderating effect of promotion. In PACIS (p. 73).

Chen, R., Zhou, Z., Zhan, G., and Zhou, N. (2020). The impact of destination brand authenticity and destination brand self-congruence on tourist loyalty: The mediating role of destination brand engagement. *Journal of Destination Marketing and Management* 15: 100402. <https://doi.org/10.1016/j.jdmm.2019.100402>

Choi, S., Lehto, X. Y., and Morrison, A. M. (2007) Destination image representation on the web: Content analysis of Macau travel related websites. *Tourism Management* 28(1): 118–129. <https://doi.org/10.1016/j.tourman.2006.03.002>

Deng, N., and Li, X. R. (2018) Feeling a destination through the “right” photos: A machine learning model for DMOs’ photo selection. *Tourism Management* 65: 267-278. <https://doi.org/10.1016/j.tourman.2017.09.010>

De Rosa, A. S., Bocci, E., and Dryjanska, L. (2019) Social representations of the European capitals and destination e-branding via multi-channel web communication. *Journal of Destination Marketing and Management* 11: 150-165. <https://doi.org/10.1016/j.jdmm.2017.05.004>

Dogra, J., and Kale, S. S. (2020) Network Analysis of Destination Management Organization Smart Tourism Ecosystem (STE) for E-Branding and Marketing of Tourism Destinations. In *Handbook of Research on Social Media Applications for the Tourism and Hospitality Sector*: 1-16. IGI Global.

Erz, A., Marder, B., and Osadchaya, E. (2018) Hashtags: Motivational drivers, their use, and differences between influencers and followers. *Computers in Human Behavior* 89: 48-60. <https://doi.org/10.1016/j.chb.2018.07.030>

Femenia-Serra, F., and Gretzel, U. (2020) Influencer Marketing for Tourism Destinations: Lessons from a Mature Destination. *In Information and Communication Technologies in Tourism: 65-78*. Springer, Cham. https://doi.org/10.1007/978-3-030-36737-4_6

Frías, D. M., Castaneda, J. A., del Barrio-García, S., and Lopez-Moreno, L. (2020) The effect of self-congruity and motivation on consumer-based destination brand equity. *Journal of Vacation Marketing* 26(3): 287-304. <https://doi.org/10.1177/1356766719886888>

Gálvez-Rodríguez, M. M., Alonso-Cañadas, J., Haro-de-Rosario, A., and Caba-Pérez, C. (2020) Exploring best practices for online engagement via Facebook with local destination management organisations (DMOs) in Europe: A longitudinal analysis. *Tourism Management Perspectives*, 34, 100636.

Gaber, H. R., Wright, L. T., & Kooli, K. (2019). Consumer attitudes towards Instagram advertisements in Egypt: The role of the perceived advertising value and personalization. *Cogent Business & Management*, 6(1), 1618431. <https://doi.org/10.1080/23311975.2019.1618431>

Ge, J., and Gretzel, U. (2018) Emoji rhetoric: a social media influencer perspective. *Journal of Marketing Management* 34(15-16): 1272-1295. <https://doi.org/10.1080/0267257X.2018.1483960>

GlobalWebIndex, 2019 Daily Time Spent on Social Networking by Internet Users Worldwide from 2012 to 2019. <http://www.statista.com/statistics/433871/dailysocialmedia-usage-worldwide/> (Accessed 20 October 2019)

Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of interactive marketing*, 28(2), 149-165.

Huerta-Álvarez, R., Cambra-Fierro, J. J., and Fuentes-Blasco, M. (2020) The interplay between social media communication, brand equity and brand engagement in tourist destinations: An analysis in an emerging economy. *Journal of Destination Marketing and Management* 16: 100413. <https://doi.org/10.1016/j.jdmm.2020.100413>

Iglesias-Sánchez, P. P., Correia, M. B., Jambrino-Maldonado, C., and de las Heras-Pedrosa, C. (2020) Instagram as a Co-Creation Space for Tourist Destination Image-Building: Algarve and Costa del Sol Case Studies. *Sustainability* 12(7): 2793. <https://doi.org/10.3390/su12072793>

Jeon, H., Ok, C., and Choi, J. (2018) Destination marketing organization website visitors' flow experience: an application of Plog's model of personality. *Journal of Travel and Tourism Marketing* 35(4): 397-409. <https://doi.org/10.1080/10548408.2017.1358234>

John, L., Emrich, O., Gupta, S., and Norton, M. (2017) Does Liking Lead to Loving? The Impact of Joining a Brand Social Network on Marketing Outcomes. *Journal of Marketing Research* 54(1): 144-155. <https://doi.org/10.1509/jmr.14.0237>

Johnson, B. K., Potocki, B., & Veldhuis, J. (2019). Is that my friend or an advert? The effectiveness of Instagram native advertisements posing as social posts. *Journal of Computer-Mediated Communication*, 24(3), 108-125. <https://doi.org/10.1093/jcmc/zmz003>

Kanje, P., Charles, G., Tumsifu, E., Mossberg, L., and Andersson, T. (2020) Customer engagement and eWOM in tourism. *Journal of Hospitality and Tourism Insights*. <https://doi.org/10.1108/JHTI-04-2019-0074>

Khamis, S., Ang, L., and Welling, R. (2017) Self-branding, 'micro-celebrity' and the rise of Social Media Influencers. *Celebrity Studies* 8(2): 191-208. <https://doi.org/10.1080/19392397.2016.1218292>

Kladou, S., Kavaratzis, M., Rigopoulou, I., and Salonika, E. (2016) The role of brand elements in destination branding, *Journal of Destination Marketing and Management*. <https://doi.org/10.1016/j.jdmm.2016.06.011>

Klostermann, J., Plumeyer, A., Böger, D., and Decker, R. (2018) Extracting brand information from social networks: Integrating image, text, and social tagging data. *International Journal of Research in Marketing* 35(4): 538-556. <https://doi.org/10.1016/j.ijresmar.2018.08.002>

Lee, D., Hosanagar, K., and Nair, H. S. (2018). Advertising content and consumer engagement on social media: evidence from Facebook. *Management Science* 64(11): 5105–5131. <https://doi.org/10.1287/mnsc.2017.2902>

Mak, A. H. (2017). Online destination image: Comparing national tourism organisation's and tourists' perspectives. *Tourism Management* 60: 280–297. <https://doi.org/10.1016/j.tourman.2016.12.012>

Mariani, M. M., Mura, M., and Di Felice, M. (2018) The determinants of Facebook social engagement for national tourism organizations' Facebook pages: A quantitative approach. *Journal of Destination Marketing and Management* 8: 312-325. <https://doi.org/10.1016/j.jdmm.2017.06.003>

Michaelidou, N., Siamagka, N. T., Moraes, C., and Micevski, M. (2013) Do marketers use visual representations of destinations that tourists value? Comparing visitors' image of a destination with marketer-controlled images online. *Journal of Travel Research* 52(6): 789–804. <https://doi.org/10.1177/0047287513481272>

Molinillo, S., Liébana-Cabanillas, F., Anaya-Sánchez, R., and Buhalis, D. (2018) DMO online platforms: Image and intention to visit. *Tourism Management* 65: 116-130. <https://doi.org/10.1016/j.tourman.2017.09.021>

Moro, S., and Rita, P. (2018) Brand strategies in social media in hospitality and tourism. *International Journal of Contemporary Hospitality Management* 30(1): 343-364. <https://doi.org/10.1108/IJCHM-07-2016-0340>

Önder, I., Gunter, U., and Gindl, S. (2019) Utilizing Facebook Statistics in Tourism Demand Modeling and Destination Marketing. *Journal of Travel Research* 59 (2): 195-208. <https://doi.org/10.1177/0047287519835969>

Ong, Y. X., and Ito, N. (2019) “I want to go there too!” Evaluating social media influencer marketing effectiveness: a case study of Hokkaido's DMO. In *Information and communication technologies in tourism*: 132-144. Springer, Cham. https://doi.org/10.1007/978-3-030-05940-8_11

Parihar, P., and Dawra, J. (2020) The role of customer engagement in travel services. *Journal of Product and Brand Management*. <https://doi.org/10.1108/JPBM-11-2018-2097>

Paris, Official website of the Convention and Visitors Bureau. (2019) <https://en.parisinfo.com/what-to-see-in-paris/monuments/famous-monuments-or-monuments-to-discover>. (Accessed 10 September 2019).

Priporas, C. V., Stylos, N., and Kamenidou, I. E. (2019) City image, city brand personality and generation Z residents' life satisfaction under economic crisis: Predictors of city-related social media engagement. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2019.05.019>

Provenzano, D., Hawelka, B., and Baggio, R. (2018) The mobility network of European tourists: a longitudinal study and a comparison with geo-located Twitter data. *Tourism Review*. <https://doi.org/10.1108/TR-03-2017-0052>

Rietveld, R., van Dolen, W., Mazloom, M., and Worrying, M. (2020) What You Feel, Is What You Like Influence of Message Appeals on Customer Engagement on Instagram. *Journal of Interactive Marketing* 49: 20-53. <https://doi.org/10.1016/j.intmar.2019.06.003>

Romero, J. (2017). Customer engagement behaviors in hospitality: Customer-based antecedents. *Journal of Hospitality Marketing & Management*, 26(6), 565-584. DOI: 10.1080/19368623.2017.1288192

Romero, J. (2018). Exploring customer engagement in tourism: Construct proposal and antecedents. *Journal of vacation Marketing*, 24(4), 293-306. DOI: 10.1177/1356766717725561

Sabate, F., Berbegal-Mirament, J., Cañabate, A., and Lebherz, P.R. (2014) Factors influencing popularity of branded content in Facebook fan pages. *European Management Journal* 32: 1001–1011. <https://doi.org/10.1016/j.emj.2014.05.001>

Statista (2019). Number of Instagram users worldwide from 2016 to 2022 (in millions). <https://www.statista.com/statistics/421169/most-followers-instagram/>. (Access date 5 April 2019).

Stepchenkova, S., and Zhan, F. (2013) Visual destination images of Peru: comparative content analysis of DMO and user-generated photography. *Tourism Management* 36: 590–601. <https://doi.org/10.1016/j.tourman.2012.08.006>

Uşaklı, A., Koç, B., and Sönmez, S. (2019) Social media usage among top European DMOs. *In Tourist Destination Management*, 1-14. Springer, Cham. https://doi.org/10.1007/978-3-030-16981-7_1

Vinyals-Mirabent, S. (2019) European urban destinations' attractors at the frontier between competitiveness and a unique destination image. A benchmark study of communication practices. *Journal of Destination Marketing and Management* 12: 37-45. <https://doi.org/10.1016/j.jdmm.2019.02.006>

Visit Berlin. (2019) Berlin's top 10 attractions. <https://www.visitberlin.de/en/berlins-top-10-attractions>. (Accessed 10 September 2019).

Visit London. (2019) Top 10 London attractions. <https://www.visitlondon.com/things-to-do/sightseeing/london-attraction/top-ten-attractions>. (Accessed 10 September 2019).

Vivek, S. D., Beatty, S. E., Dalela, V., and Morgan, R. M. (2014) A generalized multidimensional scale for measuring customer engagement. *Journal of Marketing Theory and Practice* 22(4): 401-420. <https://doi.org/10.2753/MTP1069-6679220404>

Welcome to Madrid. (2019) Madrid top 10. <https://www.esmadrid.com/en/madrid-top-10>. (Accessed 10 September 2019).

Yi, J., Ryan, C., & Wang, D. (2021). China's Village Tourism Committees: A Social Network Analysis. *Journal of Travel Research*, 60(1), 117-132. DOI: 10.1177/0047287519892324.

Yu, X., Yuan, C., Kim, J., and Wang, S. (2020) A new form of brand experience in online social networks: An empirical analysis. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2020.02.011>