Analyzing User Generated Content on Instagram: the Case of Travel Agencies

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Abstract—Social networks can become an essential part of a brand's communication strategy; they not only assist in reaching potential customers, but also help develop an online community, where users generate content about the service themselves: User Generated Content (UGC). It is known that the actual user experience, as well as feedback on social media, can have a higher impact on customer acquisition than direct commercial offers. Social media usage is on the increase in the travel industry. Instagram - the photography-centred social network - has a high number of users generating content, and this appears to be advantageous for travel agencies. The goal of this article is to understand the use and the strategy of Instagram UGC concerning travel agencies, and to analyse the impact of UGC on the community engagement. The results are based on Instagram data collected for three online travel agencies: Very Chic, Voyage Privé and Airbnb.

Keywords–User Generated Content; UGC; Social Media; Instagram; Travel Agency; indicators of success.

I. INTRODUCTION

Over recent decades, with the development of information and communication technology, the travel industry has become highly digitalised and now enjoys a high web profile. Most of the travel-related transactions now take place through the Internet via official websites. Moreover, customers like to share their travel experience online and often rely on previous customer's opinions to help make choices. User-generated content currently has greater impact on customer acquisition than traditional commercial offers, which are often seen as too aggressive.

Instagram - a social network based on photo-sharing with 600 million monthly active users - is rapidly growing and has already become the third most widely used social network worldwide. Travellers usually take many photographs during their multiple trips and share them online, together with their opinions. In this study we examine the hypothesis that Instagram user-generated content has an effect upon communication for travel agencies as well as upon customer acquisition strategies. Even if the electronic word of mouth (eWOM) of consumers is studied in depth, and is proven to have a positive effect on the company image, as well as an even stronger impact on user acquisition than marketing campaigns [1]–[6], only a few studies have been focused on Instagram [7][8] and on the Instagram UGC [9][10]. To our knowledge, no studies have yet been conducted on eWOM regarding online travel agencies and Instagram. The goal of this article is to offer a preliminary analysis of Instagram's communication strategies concerning online travel agencies, to measure the impact of each strategy on the community, and to identify the indicators of success.

The article is organised as follows: Section 2 presents related works. Section 3 presents the data collection process and the indicators that we chose to study in this work. Section 4 presents the results of the study in the case of three specific travel agencies. We end the article with a conclusion and suggest future work.

II. RELATED WORK

In [11], the authors reported that research on UGC, also known as electronic word-of-mouth (eWOM), works exactly like traditional word-of-mouth [12]. Online social media such as Facebook, YouTube, Twitter and Instagram are examples of places where users share UGC. As UGC is based on consumers' own experiences, it has proven to be trustworthy, useful and unbiased [13][14]. Early research focused on popular forums, such as message boards or Internet-based chat rooms [15]. It then extended to websites and blogs [16][17], and later to social media platforms such as Facebook and Twitter [18]. UGC reviews have been extensively studied, in particular in relation to decision-making. Other researchers have examined the effects and implications of UGC in the tourism sector [19]. In this paper UGC is mainly used to refer to reviews and interactions between users on travel recommendation websites, such as Instragram webpages.

Instagram offers to organizations a network of more than 600 million global accounts, with 30 billion photographs shared, and 4.2 billion daily likes (data extracted in 2017 from the official Instagram moderator blog). Instagram is the chosen social media platform for this study due to the growing popularity of the platform for marketing and branding initiatives. This social network focuses on advertising, promotion, marketing, distribution of ideas/goods, and also for providing information services fast, precisely and accurately, especially in the tourism sector.

III. METHODOLOGY

We conducted a semiotic study of photographs published on Instagram by voyageprive.com, verychic.com and airbnb.com. In this study, we chose to analyse 10 photographs for each of the travel agencies, as follows. First we collected the 50 most recent Instagram posts for each agency. Second,

TABLE I. Minimum, maximum and average values of indicators obtained for each travel agency

	VeryChic	VoyagePrivé	AirBnb
Average #Likes	1,098	231	13,368
Maximum #Likes	2,288	375	40,545
Minimum #Likes	471	56	3,889
Average Engagement	2.2%	2.1%	1.11%
Maximum Engagement	3.9%	3.41%	3.38%
Minimum Engagement	0.8%	0.51%	0.32%
Average #Hashtags	6	27	23
Maximum #Hashtags	12	29	30
Minimum #Hashtags	4	25	1
Average #Comments	20	2	449
Maximum #Comments	98	7	1317
Minimum #Comments	2	0	29

we measured the average engagement level of the agency based on the number of likes that each photograph obtained. Finally, from the initial dataset and for qualitative analysis, we chose four photographs having the highest amount of likes, two having numbers of likes almost equal to the average engagement level of the agency, and four photographs having significantly less likes than the average.
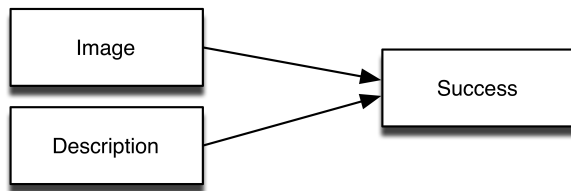

Figure 1. Methodology representation

Based on the dataset obtained, we investigated the impact of image and image description-based indicators on the indicators of success. The methodology used in this study is visually represented in Fig. 1. We established eight criteria for our study based on the image, the image description and community reactions. We obtained two image-related indicators, four description-related indicators and four indicators of success.

- Image-related indicators
  - Image family: landscape, person/selfie, activity (hotel, cooking, sport, attractions, etc.).
  - Image source: the image created by the agency; the image created by another Instagram user; the image found outside Instagram.

- Description-related indicators
  - Description type: commercial message; citation; image description; call for an action.
  - Number of hashtags used in the description.
  - Hashtags types: related to image description, related to the call for an action.
  - Geolocation type: place name or an exact location.

- Indicators of success
  - Number of likes.
  - Number of comments.

- Engagement
- Comment types: general interest expression, information request, friendship request, answer for a question, negative feedback.

Additionally, for simple numeric indicators, such as the number of likes, the number of hashtags and the number of comments, we defined an indicator of engagement showing how many interactions an image obtained, comparing this to the current community of the agency Instagram account. We defined the engagement on Instagram as the number of likes obtained by a photograph (denoted $likes(p)$), compared to the number of followers of the Instagram channel of the agency (denoted $followers(a)$). The engagement of a post p published by an agency p is denoted $Engagement(p, a)$ and is calculated as stated in (1).

$$Engagement(p, a) = \frac{\#likes(p)}{\#followers(a)} \tag{1}$$

The next section presents the results that were obtained.

IV. Results

Table I presents the minimum, maximum and the average numbers of likes, hashtags, comments, and the engagement scores for the photographs of each online agency. We observed that AirBnB has a very large Instagram community, while the VoyagePrivé has the smallest community in terms of the maximum number of likes (40.545 and 231 respectively). However, AirBnb has a lower average engagement score (1.11%) than VoyagePrivé (2.1%) meaning that Voyage Privé has fewer but more engaged followers.

We observed that the indicators of success (the number of likes, the number of comments and engagement level) are correlated. We also observed that the number of comments increases when the number of likes is high. This suggests that most of the comments received by the travel agencies are related to positive opinions from customers rather than negative.

Considering the VeryChic photographs, the less popular images mainly send out commercial messages using slightly fewer hashtags than the more popular images. The most popular messages are all borrowed from external sources.

Surprisingly, the most popular photographs include commercial messages. We observed that 9 out of 10 images depict landscapes, suggesting a common guideline within the strategy.

VoyagePrivé was also observed to publish landscape photographs (9 out of 10). Again, the top four photographs come from bloggers outside of Instagram; the description of those photographs contains calls for an action. This suggests that a good way to engage people is not only by sharing interesting information or content, but also by engaging them in acting or reacting. Once again, we observed that the less engaging photographs are agency-owned and contain commercial messages.

AirBnB publishes diverse types of photographs, of which the most engaging depict landscapes and activities, and the less engaging show people. Most of the AirBnB photographs are not agency-owned and come from bloggers or Instagram users. The most popular image descriptions contain calls for action and the least popular posts contain simple description of the photography. Most of the AirBnB photographs are associated with precise locations, which indicate a desire to contextualise/personalise their community management (9 out of 10).

Considering the content of the comment published on Instagram posts, we do not see any negative feedback on VoyagePrive and VeryChic, and only the minority of AirBnB comments are negative. Surprisingly, only VoyagePrivé answered the questions asked by community members in Instagram comments.

We observed that the photographs published by AirBnB seem to be more professional and of a higher quality than the those published by VeryChic. The content of those of AirBnB have generally the same style and a similar colour palette, although other agencies do not define any particular publishing style. Among the most engaging photographs published by AirBnB, we mainly observed the use of blue, green and brown colours. We also observed that most of the borrowed photographs emphasise highlight the photographer in the description, and the community republish photographs that are more engaging, probably because of the popularity of the photographer. We did not observe any impact of geolocation on the success indicators, probably due to the reduced dataset.

The number of hashtags used in the description do not influence the engagement level: the most and the least engaging photographs had about the same number of hashtags. New indicators, such as types of hashtags, should be added in order to better capture the engagement level based on the usage of hashtags. We observed that AirBnB have their own agency hashtags #airbnb and #LiveThere, and the agency ask users to publish their experience through photographs using those hashtags. We also observed that AirBnB regularly republishes user-created content and obtains a high engagement level. However, VeryChic do not have any branded hashtag and VoyagePrivé never publish photographs of other Instagram users.

V. Conclusion and future work

This paper has described our first exploratory study on the indicators of Instagram communication success and on the role of user-generated content on community engagement. We analysed Instagram images with different engagement levels produced by online travel agencies. We observed that UGC has a higher success for the online travel agencies community than for specially created images, and that is especially the case with AirBnB. The most engaging photographs depicted landscapes and contained calls for action in the description: calls such as like, retweet or comment. The most successful content came from Instagram users or, more often, from non-Instagram bloggers sharing their experiences. Although our current dataset is limited, it already shows the importance of user-generated content in community management on Instagram.

This current study is the basis of our larger study on the indicators of Instagram communication success. We observed, for example, that the most engaging photographs had similar colours, and that high quality photographs generate more comments. These observations provide us with new indicators to be added to the research. We plan, in our research agenda, to combine new indicators and to test them on a broader dataset. We wish also to include finer indicators of UGC in order to better understand its use by the agencies.

Another potential research direction is a deeper investigation of post descriptions and hashtags via semantic analyses and text mining. The same analysis could be applied to understand what type of content provides what sort of reactions. Finally, it would be interesting to analyse the Instagram community of agencies, agency hashtags use and message propagation.

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