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Hospitality Research

Measuring Customer Experience Through Emotions

A new approach to evaluating emotions expressed in the reviews of guest(s) within the service industry

Date   22 February 2017
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Version   HTH Working Paper Series, Vol.1/1, 2017

1 Abstract

A new approach for evaluating customer-experienced emotions expressed in online reviews was developed during a project for Amsterdam Marketing. By combining the identification of emotions in online reviews with existing studies on emotion, a new grading system was created to help service oriented companies obtain well-founded insights into how their performance is experienced by their guests. Using the example of the research carried out for Amsterdam Marketing, this approach is explained and its applications identified. Paving the way for future research, combining these two studies establishes a complete new way of measuring the quality of customer experience in any company.

2   Introduction to the field of measuring emotions

A project to evaluate how tourists experience the interactions with locals in Amsterdam was conducted by MBA researchers of Hotelschool The Hague for Amsterdam Marketing. This project was tutored by Karoline Wiegerink, professor of City Hospitality and City Marketing at Hotelschool The Hague.

When starting to structure this project, a combination of two perspectives were identified: calculation and grading of emotions in online reviews, and current application of studies on emotion. Bringing these perspectives together resulted in a new approach focused on answering the following question that businesses deal with: How can we objectively measure and grade the emotional experience of guests' interactions in online reviews? First, an explanation is given for both perspectives: the current methods of emotion calculating in online reviews and the current applications of studies on emotions. Next, the new method is explained, with the Amsterdam Marketing project as exemplary case. The results show how this new approach answers the main research question. In the conclusion the applications of these answers are elaborated, showing that the new approach is a good basis to use not only for organisations but also to pave the road for future research on emotion and guest experience.

As social media platforms for guest reviews grow bigger and bigger, the method of qualifying the brands according to consumer standards is changing. This trend is more obvious in the hospitality industry (Oskam & Boswijk, 2016), (Hensens, 2015), where users weigh more on what reviewers say online than on the classical hotel star ratings. Reviews exist to focus on the perception of customer service quality, while the hotel star rating system concentrates on objective tangible criteria such as cleanliness and condition of facilities (World Tourism Organization, UNWTO, 2014). Hensens concluded that with more developed technology such as mobile devices, users started creating even more reviews and as a result, online reputation management start-ups have appeared (Hensens, 2015). These start-up companies provide services using existing online reviews, for example how to create values out of reviews or how to effectively conduct online marketing. Other companies provide a detailed overview of all the online activities that apply on their company.

Analysing guests emotions conveyed in online reviews has been gaining ground in organisations, especially as their focus becomes more customer-centred (Magids, et al., 2015). As companies identify guest experienced emotions as more and more important, studies of emotions have also become more important. One of the first examples of the application of studies on emotion is the "basic model of product emotion" by Pieter Desmet of the Technical University of Delft (Desmet & Hekkert, 2002). As Desmet is focused on positive

design, his model "revealed the systematic nature of emotions evoked by designing objects." (TU Delft | Faculty of Industrial Design Engineering, 2017). His study has since been used for other research as well as in the industry, for example companies that advise on designing meaningful services and products that bring happiness to the customers use this model.

The key to the successful analysis of emotions depends on how accurately the assessment of emotions can be done. The way of analysing emotions varies in different industries, for instance the Positive and Negative Affect Schedule is frequently used to measure general affective states in psychology with a range of listed emotions (Crawford & Henry, 2004), (Watson, et al., 1988). Another example is the facial action coding system (Ekman, et al., 1980), an emotional science platform method that uses facial expressions to assess emotion (Kaliouby, 2014). By utilising emotion analysis methods, companies try to create emotional connection with customers, and these moments where there is a connection between the company and their customer is called a touch point. A touch point is an opportunity for companies to leave a positive impression, so responding to their customer in the right way is crucial. As confirmed by Magnini, Crotts and Zehrer, there is a strong correlation between customer delight and repurchase intention and the largest creator of customer delight is customer service (Magnini, et al., 2011). It is people who create the delight and companies are starting to understand that more and more. For example, the retail market developed a scorecard that visually demonstrates the correlation of customer engagement in relation to increased annual spending, churn and tenure (Kumar, et al., 2010).

These examples prove that companies are more aware of their perceived performances, and that there are already different measurement tools available. The next section explains a new and different methodology on how to measure interaction experiences of guests, and also focuses on finding out how hospitable a certain industry or business is. To make this methodology clearer, the example of the research for the city of Amsterdam is used.

3 Explanation of Method using a Real Life Case

In this article we applied the created method to the research for the city of Amsterdam. The main challenges were how to evaluate the interaction between the tourists and the locals, and how to gather relevant data. For Amsterdam, this is important information as both tourists and locals are the target market and they influence each other greatly (Armenski, et al., 2011). Thanks to the participatory characteristics of the Internet, there is an abundance of travel related data available online in the form of customer reviews. Even though there is vulnerability due to business interests of service providers as well as varying levels of expectation by customers, TripAdvisor and Airbnb, who support user-generated content, dominantly have reviews regarding interactions between users and the locals. Additionally, some evidence has shown that these reviews are highly reliable. First, there are more than 350 million reviews generated so far and misleading reviews are negligible; and second, it is consequently easy to detect fake reviews due to their irregularities (Chua & Banerjee, 2013), (TripAdvisor, 2016). Hence, this article argues that analysing the word values from the objectively selected online reviews can help evaluate the impact of local service providers on tourists' experience.

Motivations to write online reviews vary, and include both intrinsic and extrinsic motivators. The former means doing an activity for pure enjoyment and the latter refers to doing an activity due to instrumental values (Ryan & Deci, 2000). More specifically, writing reviews can be for self-enhancement, social benefits, advice seeking, helping other consumers, warning other consumers, and venting negative feelings (Rensink, 2013). These motivators are highly affected by the local service providers interacting with consumers (tourists). Not surprisingly, areas such as accommodations and restaurants have more UGC (User Generated Content, 1 million, and 4 million respectfully) compared to attractions such as museums with 655,000 UGC (TripAdvisor, 2016). Similarly, in this research, the reviews that mention the interaction with locals most were collected in restaurants, and the least were in museums.

Figure 1. Research Funnel

The reviews assessed provide us relevant information about the interaction experience of the guest, but with so many reviews online it needs structure. This is where our framework comes in. On the right is the funnel framework that explains how our method of research is designed (See Figure 1. Research Funnel). The first step is to collect the reviews online. The second step is to identify the interactions in the reviews. From these interactions, the emotions expressed are identified and categorised in one of 38 standardised emotion groups. These
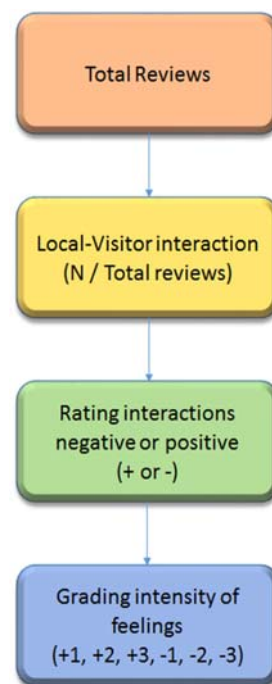
standardised emotion groups are positive or negative, making a distinction in the emotions. Finally, the emotions are graded. Positive active emotions were given +2 points, positive passive emotions +1, negative active emotions –2 and negative passive emotions –1. Any adjectives mentioned in the interaction give an extra +1 or –1, depending on the type of emotion mentioned. It concludes in several types of data; total interactions/total reviews, total positive emotions, total negative emotions, grading of positive emotions, and grading of negative emotions. From this data, numerical conclusions can be drawn.

To further elaborate on this method, the example of the Amsterdam research is described.

The structure in this city research is based on the cycle of the tourists through Amsterdam. Five main touch points between tourists and locals were identified; (1) arrival in the city, (2) transportation, (3) accommodations, (4) city experiences, and (5) leaving the city. Based on the Visitors Journey Model by Many Lane, Figure 2 was created (Lane, 2007). The visitor's journey of the Amsterdam tourist was created with these 5 touch points, which can be viewed below.

Figure 2. Tourist visitor cycle for Amsterdam
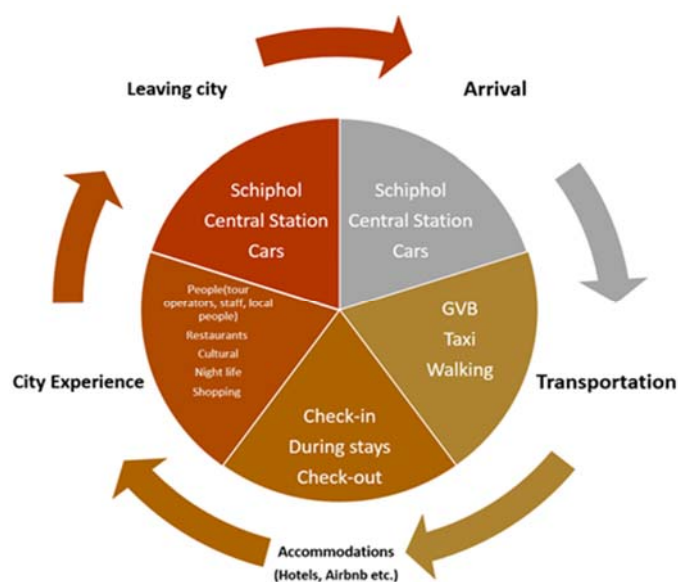
When identifying the 5 touch points in online reviews and combining them with interactions between tourists and locals, four main components were identified: (1) public transportation, (2) Airbnb, (3) restaurants/cafés and (4) museums. Airbnb was chosen for the "accommodation" touch point because their business allows property or homes privately owned by locals to be rented to tourists for their stay in the area. This is very applicable to the research as in the reviews there is a greater chance that information about the interaction is given. Public transportation, restaurants/cafés and museums (city experience) reviews are identified as the other three touch points as these services are provided by locals and identify tourist-local interactions. These were collected from TripAdvisor as it is an internationally known review site and the largest review website for travellers (Wang, et al., 2016). From each of the four components 80 reviews were collected, all in an

objective manner depending on the component and web page (Airbnb and TripAdvisor), resulting in 320 reviews in total. Following selection, all reviews are read, and the sentences that describe a tourist-local interaction were highlighted. But how are these interactions graded in order to come to objective conclusions?

In the tourist-local interactions, people grade the experiences based on their emotions. By using the research of Scherer (2005) "What are emotions? And how can they be measured?", these emotions can be categorised. In his study, Scherer uses a list of 38 main emotions from which all the emotion descriptions can be brought back to. For each of the four components, (1) public transportation, (2) Airbnb, (3) restaurants/cafés and (4) museums, the total amount of emotions identified from the online reviews were counted and distributed among the 38 main emotions listed. Knowing the total amount of emotions and how many of the main emotions per category are present in the reviews is relevant information, but does not quantitatively show the value of these emotions. As a second step, Scherer used a framework to categorise his emotions into negative or positive, and into active or passive, creating four distinct emotion categories (see Figure 3).

Figure 3. Framework of Emotion Intensity Distribution (Scherer, 2005)

We used this framework where the 38 emotions were distributed over the four categories, which distinguish between positive and negative emotions, active and passive emotions, and subsequently the intensity of the emotion.
When dividing these four parts, the following grading system was created:

Positive actively = +2
Positive passively = +1
Negatively actively = -2
Negatively passively = -1

Any extra adjectives added to the emotion (like "very") would add another point depending on the emotion (positive = +1 and negative = -1), making a maximum of 3 points, negative or positive, per emotion registered.

In summary, this research approach resulted in the collecting of 320 reviews, 80 per touch point component (public transportation, Airbnb, restaurants/cafés and museums). In these reviews the tourist-local interactions were highlighted and the emotions expressed identified. These emotions were then distributed under the 38 main emotions list. These main emotions were then graded according to the total positive and negative emotion scores per category, which were then compared to each other and conclusion subsequently drawn. The results will be presented and explained in the next section.

4 Results

Looking at the Research Funnel (see Figure 1) from the previous section, the results will be presented in that exact order per touch point and represented in Figure 4. First, all the online reviews were collected per touch point. Next, the numbers of tourist-local interactions for that touch point were counted, and the emotions identified. These interactions were then distributed into either positive or negative, giving a total amount. Finally, the grading of the emotions is completed: creating results that can be used to make conclusions, for example recognising the best practices (or best experiences).

In the example of city hospitality, the data shows that Airbnb reviews scored high in the number of positive interactions (104 total), but the Museums scored higher in the grading of the positive emotions (2.19 out of 3). Restaurants and bars scored the highest number of negative interactions, (29 total) but Public Transportation scored higher in the grading of the negative emotions (1,12 out of 3). From these results conclusions can be drawn, detailed in the next section.

5 Conclusion

Given the importance of feedback and online reviews for businesses, a new trend of excellence and innovation within the service industry enhances the customer experience. More precisely, in the field of hospitality management, it is noticeable that there is a continuous and increasing concern about what customers think and reflect on social media and online platforms. New tools for customer management that contributes to the companies assessing factors such as performance or quality, seek points of improvement and contribution to the brand's image.

However, further applicability of the online review's content is possible and therefore, the research conducted for the City Marketing team of the Municipality of Amsterdam takes a step forward to evaluate the personal touch of the local service providers on the overall hospitality experience of the tourists. All in all, the underlying aim is to understand and assess what visitors to Amsterdam come across when interacting with locals in a combination of personal, social and physical contexts.

This article presents a different manner of analysing online reviews. Using the Visitor's Journey Model (Lane, 2007) as a way of finding the main touch points, the research intended to extract applied conclusions for the mentioned city of Amsterdam. However, the assessment criteria and model of research can be applicable to any other city organisation, as well as a way of evaluating customer's feedback in any field. In this regard, even though all kinds of organisations are making progress to further process customer's feedback and online reviews, there are still question marks when translating them or at least, doing something meaningful with them. Unquestionably, reviews and their content contribute to the decision making process by identifying needs and points of improvements, however, there is a need to go above and beyond. Emotions are conveyed through customer words, clearly stated or hidden behind simple expressions. This is where this research finds its major use for any company striving to get "emotionally" connected with their customers. This analysis not only gives extra information about which areas of concern need to be tackled first, but also adds value to feedback management procedures, now that it is possible to analyse customer's emotions.

In this regards, the analysis reveals tangible insights from calculations and thus, proof of its functionality. For instance, in the city hospitality case, data reveals that Museums score the highest in the intensity of the positive emotions and this can be explained with the fact that people do not go to museums for the personal interaction and thus they do not expect a personal encounter, and once it happens, it happens in a positive way because it is very unexpected. This really stays in their mind which is why it has such a high intensity. This proves that when guests experience an (unexpected) interaction with an inhabitant or a service provider, it tends to be more memorable and thus, more likely to lead to a review. Public Transportation scores the highest intensity of negative emotions, likely because travelling usually causes a high amount of stress, and people just want to get to their destination. And if they ask for help or assistance,

and this interaction is neither beneficial nor helpful, it can cause a high negative intensity emotional response.

Overall, despite its valid contribution and conclusive results, there are certain limitations regarding the available data and analysis that should be taken into consideration for future investigations of the same kind: first, reviews were obtained in online platforms from third parties and their reliability can always be questionable by the reader. Second, results relied upon manual procedures and the expertise of the four Master researchers using basic tools for data collection and therefore, are subject of human error. In addition, the analysis comprises of a limited 80 reviews per touch point and it cannot be considered a representative sample in the increasing number of reviews available. Next, Airbnb encourages the double-sided reviews and the need for reciprocity will always play a role when posting one's opinion in public networks, with risk of bias. Only 5 touch points where used in this research, therefore, for the bigger picture, the entire customer journey could reveal further insights. Finally, certain words encountered in the analysed reviews did not appear in Scherer's model of emotions and thus, were taken into discussion for evaluation.

The research proposes to possible users of the method several ways of positively reinforcing customer's experience by: (1) keeping track and evaluate the customer journey map and the assessment method applied in this research; (2) application of customer centric strategies to strengthen brand management; (3) combining and enhancing this method by applying advanced feedback processing tools (4) improving trainings based on the outcomes of this method to potentiate the organisation's initiatives. Consequently, when an airport wants to assess their customer's satisfaction results, they could possibly locate blind spots in their service. Passengers regularly review online about their experience at airports. Mobile phones are constantly being released based on customer's liking and their feedback is usually posted and commented on YouTube videos. Therefore, any feature of the device can be easily evaluated by what users repeatedly highlight and experience. All in all, there is not only one single use for this evaluation but a method with high-gain applications.

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