Development of an Instrument For Measuring Consumers’ Perception of Atmosphere

Morten Heide, University of Stavanger, Norway
Kjell Gronhaug, Norwegian School of Economics and Business Administration, Norway
Kirsti Laerdal, University of Stavanger, Norway

It has been claimed that consumers do not seek products and services as such, but rather the positive experiences these may yield. Atmosphere is frequently emphasized as a tool for creating such experiences. However, the concept is vague and difficult to measure, which represents a considerable challenge with regards to improving and managing atmosphere. In the hospitality industry, targeted survey instruments to measure consumers’ perceptions of atmosphere in hotel settings are lacking, despite considerable interest worldwide. This paper reports a first step toward the goal of developing such an instrument. Major findings are reported and implications highlighted.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/13343/volumes/v35/NA-35

[copyright notice]:
This work is copyrighted by The Association for Consumer Research. For permission to copy or use this work in whole or in part, please contact the Copyright Clearance Center at http://www.copyright.com/.
submitted and published than research that reports no significant results). The results show no potential publication bias. In addition, the majority of moderator variables were insignificant. We cross-checked this result by calculating the fail-safe N of Rosenthal (1979) i.e. the numbers of ‘missing’ studies needed to nullify the result. The fail-safe N seems very unlikely to exist (N>1000). Hence, we conclude that there is no threat for the publication bias in our meta study.

We find that homogeneity test is significant, which means that there is systematic variability in the effect sizes. We identify five moderators: type of feeling-right operationalization (process-based vs. outcome based); type of regulatory focus (trait vs. ideal-ought priming vs. identical task priming vs. approach-avoidance strategic priming vs. attribute priming); research domain (laboratory task vs. health vs. education vs. other); type of incentive for participation (voluntarily vs. money vs. personal gift vs. course credits); type of student sample (high school vs. college), and cultural background (independent vs. interdependent). It appears that types of RF priming, research domain, type of incentives, and type of student sample were found to be significant predictors of the magnitude of effect sizes.

Our findings should be interpreted in the light of their limitations. First, we were only able to use a relatively small number of articles as only these met the imposed criteria for inclusion in the sample. Many articles did not contain enough information for calculation of the interaction effect size. Second, treating multiple effect sizes of the same studies as statistically independent may also create a certain degree of bias in the findings. As more effect sizes become available, future meta-analyses can be conducted by taking into account dependency among effect sizes. Third, in addition to the major study variables included in our analysis, other potential moderators may help to explain variation in effect sizes. For instance, we were unable to record the amount time participant spent in experiments; as such information is frequently not reported by researchers. The availability of such information may, for instance, help to better interpret the level of participants’ involvement in the study. Overall, our review of the literature demonstrates the relevance of the regulatory fit effect in consumer decision-making.

References

Note that a complete list of full reference used is available from lead author

Development of an Instrument for Measuring Consumers’ Perception of Atmosphere
Morten Heide, University of Stavanger, Norway
Kjell Gronhaug, Norwegian School of Economics and Business Administration, Norway
Kirsti Laerdal, University of Stavanger, Norway

The concept of atmosphere is important both in everyday life and business. For example, consumers use time, energy and economic resources to create atmosphere in their homes involving costly activities such as decoration and purchase of art. Also, in business, atmosphere is considered vital. In the hospitality sector atmosphere is perceived an essential, if not the key factor, to attract and satisfy guests. The same interest applies to the retailing industries. To improve the atmosphere of their establishments, firms often make costly and risky investments. However, the concept is vague and difficult to grasp, which represents a considerable challenge with regards to improving and managing atmosphere.

In this study, the hospitality industry was selected as the empirical setting. Despite considerable interest worldwide, targeted survey instruments to assess consumers’ perceptions of atmosphere in hotel settings are lacking. This paper reports the process of developing such an instrument.

Several attempts have been made to define the concept. For example, atmosphere has been described as “the air surrounding a sphere” (Kotler, 1973). Mehrabian and Russell (1974) developed an influential framework for analyzing the effects of different environments on individuals. Bitner (1992) highlighted the concept of servicescape, i.e. the physical environment in which services are delivered, which can be an important aspect, but in no way fully captures the phenomenon of atmosphere. A review of relevant studies (see reference list) points toward three essential elements that can be combined to create the desired atmosphere: (1) atmospherics (background features such as temperature, scent, music and lighting), (2) social factors, and (3) design factors. Consumer responses to atmosphere might include cognitive, affective, physiological and behavioral reactions. However, the literature offers few indications regarding what the concept really captures, nor how to measure it. Consequently, an empirical approach was found necessary.

The development work was based on recommendations from previous scale development and measurement studies (see reference list). The work included two phases, i.e. an inductive and a deductive phase. In the inductive phase, we examined how the concept has been applied in relation to hotels. An internet search on “hotel” and “atmosphere” in combination yielded several million hits and a search routine was employed for identifying adjectives used for describing atmosphere. Every time a new adjective for describing hotel
atmosphere was encountered, this word was registered in an inventory of hotel atmosphere descriptors. Alternative search engines were used to expand the search, as well as synonyms (ambience, charm, appeal and resorts, motels, inns). We also scrutinized a large number of hotel design books, architectural books and travel magazines. When no more new descriptors were found, we concluded that the search was exhaustive. At this stage the inventory had 600 unique descriptors, which we consider as the universe of hotel atmosphere descriptors.

In the deductive phase, we tested the relevance of each descriptor and reduced the number in order to remain with the most fundamental ones. The 600 descriptors were first reduced to 458 by employing judgment-based criteria. Thereafter the 458 descriptors were empirically tested using a three-stage randomized experimental design. Subjects were shown a ten-minute presentation of a hotel randomly selected from a total of 12 presentations. Afterwards they rated how relevant each descriptor was for describing the hotel’s atmosphere on a seven-point Likert scale. In the first stage (n=78 undergraduate students, specializing in hotel/tourism management at a leading university in Norway) the number of descriptors was reduced from 458 to 201. The second stage (n=77, different sample from the same student population) yielded a further reduction to 135 descriptors. These descriptors were tested in the third stage (n=278, using a heterogeneous sample of students, i.e. from a wide range of disciplines), which gave the 43 descriptors that were subsequently tested in the exploratory field survey. Here we collected data from actual hotel guests in six hotels, all members of a leading hotel chain in Norway.

A total of 559 guests were invited to participate, of which 369 responded (i.e. a response rate of 66 percent, which we consider satisfactory). The composition of the sample (gender, nationality, age, type of guest) was found to be representative of the guest population of the respective hotels. In addition to questions about the respondent and ratings of various aspects of the hotel, the questionnaire included the 43 descriptors (in randomized order). The respondents were asked to indicate how relevant each was for describing the atmosphere in the hotel.

Following exploratory factor analyses of the responses on the 43 descriptors, we decided to proceed with a four-factor solution. The first factor could easily be interpreted as distinctiveness (high loadings on descriptors like special, fascinating and different). The second factor was interpreted as hospitality (loaded mainly on descriptors like welcoming, hospitable and professional). The third factor had powerful loadings on descriptors such as pastoral, resort and holiday and could consequently be interpreted as relaxation. The fourth factor loaded on descriptors like classical, traditional and upper-class and was thus labeled refinement.

The factor structure was further tested by confirmatory factor analysis using LISREL (Linear Structural Relations, Jöreskog and Sörbom, 2004). Atmosphere profiles were produced for the six hotels by plotting the mean factor scores. These profiles give a visual picture of the type of atmosphere that characterizes the hotel (there were highly significant differences between the hotels on the four factors). To test the predictive power of the indicators we used discriminant analysis. The random probability of predicting which of the six hotels the respondents had stayed in is 16.7 percent (i.e. 1/6). By including the atmosphere measurements, the probability increased substantially, i.e. 87.4 percent of the respondents were correctly classified.

The research presented here represents a step towards developing an instrument to measure atmosphere perceptions. Given the considerable interest, and consequently the presumed value of atmosphere as an intangible asset, there are a number of areas where a targeted measurement instrument would be useful. For example, the instrument could be employed to assess the extent to which the atmosphere of a particular establishment differs from that of its competitors, and whether the atmosphere offered satisfies the demand of the market segment aimed at. Also, the measurement instrument could be used to explore the relationship between atmosphere and key variables like customer loyalty, word-of-mouth, and repeat visits to mention a few.

Most managers have predefined goals to follow. To establish and create a desired atmosphere is often left to design experts (e.g. architects and interior designers), or handled by the owner’s gut feeling/intuition. Being involved in atmosphere measurement can help the manager to improve his or her professional judgment and consequently reduce the risk of bad investments based on feelings more than facts. The measurement instrument could also be useful in identifying gaps (e.g. areas where staff members’ perception of the atmosphere differs from that of the guests), as well as for measuring the effect of various interventions (e.g. pre- and post measurements in connection with investments to improve the atmosphere or training programs to enhance hospitality). Finally, the instrument could be used for testing how effectively different promotional material can communicate the salient aspects of the establishment’s atmosphere to potential consumers.

References