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GREEN REACTIONS: PERCEPTIONS OF SUSTAINABLE HOTELS

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Abstract

Sustainability is a current issue that has proven to be a challenge for many businesses especially those in the hospitality industry. The proposed study will look into these challenges and identify guest perceptions of sustainability within a LEED certified hotel and then determine whether these perceptions are of positive or negative benefit. Guest perceptions are determined by the commitment to sustainability, based upon both the sustainability practices in place and also the advertising of the program, which for the hotel studied, is none. The effects of no promotion and high sustainability will be considered in evaluating the experience created for guests both within the servicescape and the atmosphere created from the compilation of various initiatives. Evaluating perceptions from guests at this hotel will further investigate the means of how guests determine if a hotel is “green committed” or “green washing” and will further provide insight to hotels on the benefits of becoming sustainable.

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Introduction

One of the service industry's most unique characteristics is the bundle of both tangible and intangible products offered to a consumer. These aspects are "complementary of each other and perceived as the integral parts of a whole travel experience. Although the tangible and intangible products are dissimilar in characteristics, they can be distinguished by their effects on customer satisfaction or combined for improving customer satisfaction" (Albayrak). This combination or service product is what determines a service experience and is what customer's base their opinions, perceptions and judgments on. The tangible aspect refers to the products within the business that can be handled, touched or seen such as the selling of a meal, hotel room or a cup of coffee. The intangible refers to the service aspect of the product where it is simultaneously created and given to guests and likewise cannot be taken back or reserved.

Similarly, the resources that are used today cannot be taken back and saved for future generations. Realizing this, the volume of sustainability awareness in today's society has increased greatly. Businesses, such as hotels, in the service industry are faced with the challenge of how to incorporate sustainability initiatives into both these tangible and intangible aspects of their business. Additionally, the difficulty lies in how to relay this information to guests in order to achieve the most benefit to the organization, as an additional incentive to implement these changes.

This study will look to provide insight to hotels on the benefits and useful ways in which to participate in corporate social responsibility regarding the environment. By determining the effectiveness of advertising sustainability programs, the hotel can then utilize this information to further their sustainability programs. The data will hopefully support the benefits to becoming committed to sustainability and allow hotels to see the connection and opportunity in business terms through implementation of sustainability in both tangible and intangible aspects. It will

focus on gauging guest perceptions of a highly sustainable hotel that is focused on altruistic reasoning for implementation and considers minimal amounts of advertisement. These perceptions will touch upon determining what factors help to distinguish “green committed” hotels from “green washing” and see how tangible and intangible parts of the experience are affected.

Literature Review

All companies work to incorporate corporate social responsibility into their organization to some extent. It is present in any organization working under honest and fair labor practices and one who stresses the importance of ethical work behavior among employees. This can extend out much further beyond just employees and customers and incorporate the community but also most recently stress an importance on the environment. Companies take the time to do this in efforts to further develop their organization. Proving the importance of corporate social responsibility in numerical terms, CorporateRegister.com, a website dedicated to social reporting, now contains over 32,000 reports from over 7,500 companies in 157 countries. As can be seen, the idea of ethical and impactful business is extended across the globe and is proving beneficial to companies.

With particular attention to sustainability and corporate social responsibility dedicated to helping the environment, businesses along with individuals are challenged to weigh the current benefits of a particular action or procedure against the future effects and outcomes of those activities. “Companies that practice sustainable development measure their success by the long-term impact of their activities on the economy, the environment, and society.” Companies who annually report their corporate social responsibility and sustainable activities, “believe it's in their own best long-term interests to conduct business in an environmentally and socially responsible way” (Clikeman).

An IBM study polling over 20,000 consumers across 5 retail segments further explored building advocacy within consumers and attributed it to “a deep understanding of the wants and needs of the target customer, infused through all operations” (Global). It has further been concluded that recent demand for sustainable business is occurring, where consumers are researching and becoming informed about regular business practices and how they relates to a

company's environmental impact. From this, consumers are basing their involvement with the company and their purchase decision. The company is pushed towards making sustainable decisions based upon customer wants, which then determines the company's desire to remain competitive among their competition. The desire and need for more sustainably conscious business has been researched and set within the retail industry and from it has developed customer advocacy and loyalty. "There are many reasons why retailers should consider increasing their focus on "going green,"" and "social responsibility and "going green" are not disconnected from building customer loyalty, improving revenue and managing costs" (Lowe).

When further focusing on operations within the hotel industry, it was similarly found that customers are also seeking green operations and consider sustainability to be of high value.

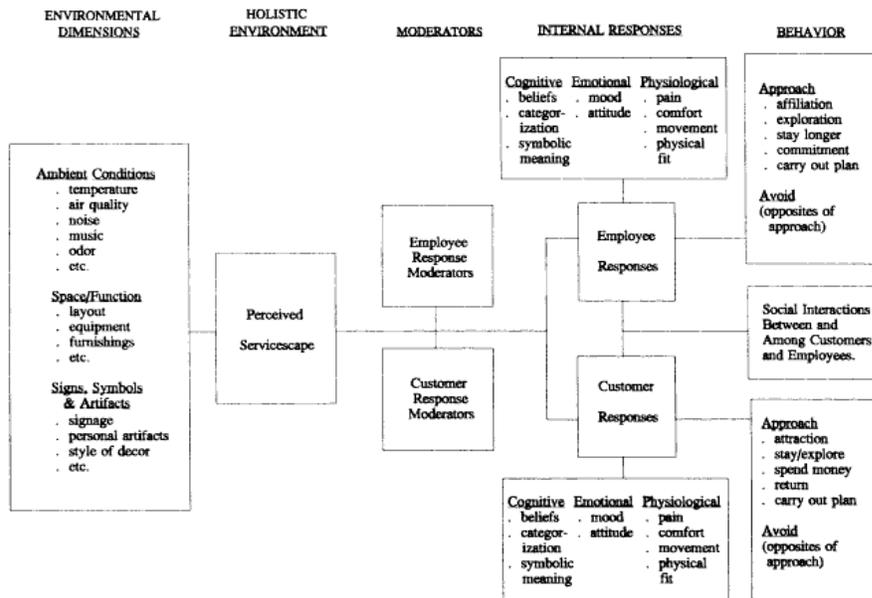
"Being a green hotel can provide a basis for good marketing strategies in that its environmental friendly practices may help position it differently in the competitive arena" (Manaktola).

"Marketers at a green hotel should actively find ways to increase environmental concerns (e.g., promoting green campaigns) that potentially contribute to building their favorable attitude toward a green consumption in the long-term" (Han). Additionally, strategically engraining sustainability concepts into company culture and business practices has proven to result in cost savings and high return on investment for businesses and within low payback periods. Overall "green hotel business is believed to be a growing niche in the current competitive lodging industry" (Manaktola).

Insight regarding sustainability in various industries exists and sustainability has been regarded as a beneficial practice. However, extensive research has not been done to further explain the necessary involvement of sustainability in the hotel industry and involvement on the consumer's behalf. When reviewing the facts about environmental impact, commercial buildings are among the top rated in energy consumption and overall impact. With the nature of the hospitality business and guests traveling to enjoy themselves, guests especially within luxury

properties often disregard factors such as environmental footprint. Because of this, the role of the hotel and the hotel company has increased with regards to implementing sustainability initiatives and decreasing impact. The challenge then arises in how to do this without compromising the experience for the guest but maximizing their involvement and commitment along with the hotel. A study conducted just this year at Cornell University further analyzed guest reactions to Sustainability Initiatives since little research exists in this area. Furthermore, gauging guest perceptions especially in terms of advertising and how to relay sustainability messages to portray a positive image to consumers has not been extensively studied.

Apart of further analyzing guest perceptions of sustainability is to further explore the tangible and intangible components that create the service product. Developed by Booms and Bitner, the idea of servicescape becomes crucial. This refers to the impact of the physical environment in which a service process takes place, on the consumer and employee. The perceived servicescape determined by either a consumer or employee can be divided into 3 environmental dimensions: ambient conditions, space and function and signs symbols and artifacts. Sustainability initiatives implemented in any of these areas within a hotel can therefore affect the overall servicescape of the hotel and the perception on behalf of the consumer or employee. The cognitive, emotional or psychological response to this perception then influences the behavior of the individual. In terms of a hotel, this behavior can have a positive or negative impact on the business and be a desired or undesired result. Further explanation can be seen in the figure below, detailing the framework for understanding the idea and impact of servicescape.



Adapted from the study *Servicescapes: The Impact of Physical Surroundings on Customers and Employees* by Mary Jo Bitner

“The human behavior is influenced by the physical setting in which it occurs” and so changes in this due to implementation of sustainability practices can alter a guest experience or perception. These tangible aspects affected in combination with the intangible create the service experience for a guest and further determine their perception of the organization as a whole.

Overall, it is important that the hotel industry further investigate the benefits and logistics with regards to sustainability, the service product and advertising. The knowledge of the sustainability program translates into perception, which then creates guests opinion, relating to satisfaction. As research states satisfaction is a determinant of customer loyalty and repeat business, both of which could be additional benefits to hotel companies. The response to a sustainability initiative as seen through servicescape, tangible or intangible aspects, then affects consumer behavior and the overall business.

Additionally, negative publicity has many businesses struggling to prove to consumers that their investment in corporate responsibility is altruistic especially when there are many

benefits as previously stated. While sustainability programs do offer benefits to the company they are done for the purposes of protecting our environment and doing business in a sustainable way. Corporate social responsibility has been a key component of all companies but the extent to which they operate and the reasoning behind it is something that cannot always be rightly observed by consumers. This challenge is apparent in the hospitality industry, especially with regards to sustainability. With current advertising and behind the scene eco-friendly action, hotels struggle with how to convey sustainability to guests and decrease impact while maintaining if not improving satisfaction and the overall guest experience.

Study Design

Hotel Selection

The study examined guest perceptions and satisfaction of a 185-room, luxury hotel located within a United States city. The hotel itself has been classified under two levels: high sustainability and low promotion.

High sustainability is classified as a hotel that has achieved a rating from the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) certification. This certification system known worldwide, proves as "verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts." (USGBC).



Sustainability Performance Areas: U.S. Green Building Council LEED Certification

In order to maintain a "whole building approach," the sustainability performance areas listed above require the organization to institute initiatives in multiple capacities: starting with the

design, and then focusing on construction and later the operation. Each of the areas listed above undergo a rigorous third party evaluation and are rated on a point system. This then determines the ranking of the building. The hotel used in this study was rated Platinum or the highest qualification but additionally focuses on departmental improvements within the organization, to furthermore contribute to their commitment to operational sustainability and responsible tourism. In contrast, a hotel considered low sustainability would not be LEED certified, lack sustainability momentum and institute minimal initiatives (less than 5) and effort.

The promotion aspect classifies the amount of publicity and awareness given to guests established on behalf of the hotel. In this case, the hotel studied is considered to be of low promotion since just 1 medium of communication is used: a rather unobvious link on the company website. A high promotion level would be considered one where multiple mediums, 4 or more, are used and promotion is done within advertisements and on location at the hotel.

Subjects

A total of 37 usable responses were obtained. All subjects were guests of the hotel during the 2011 year but further demographic information was not considered. Responses were collected in the form of questionnaires that were placed in guest rooms and completed and returned to the front desk by guests.

Measurements

Awareness of the sustainability practices, commitment of the hotel, perceived reasoning and satisfaction of air quality were all measured by means of survey questions answered by guests. Each question was created and applied specifically for use in this study.

Awareness was determined by questioning the subject on the number of sustainable practices known to them to exist at the hotel. Ranges from 0, 1-2, 3-5, 6-10 and 11 or more, the

groups offered in order to classify the number of initiatives, were set to see how knowledgeable the guest was.

These measurements were established in order to determine the effects of both high sustainability and low promotion on guest's perceptions and within both intangible and tangible areas of the service product. The tangible aspect is represented by measuring the satisfaction of air quality and thermal comfort set within the room. A sustainability initiative at the hotel was the implementation of an energy saving instrument that automatically regulates room temperature in guest rooms. By studying the perception of room temperature and additionally the satisfaction of the air quality, which has been influenced by this instrument, it can then be determined how the sustainability initiative is influencing guest perceptions. Among other tangibles, the idea of servicescape includes offerings within areas of the physical facility and ambient conditions. Temperature and air quality serve as representations of ambient conditions and in this study as a satisfaction measure, are generally applied to overall satisfaction with reference to the servicescape provided at the hotel.

A perception of the servicescape under this sustainability initiative was measured by 3 questions: one providing opinions on the general comfort of the room and two questions determining satisfaction levels with regards to temperature and then the air quality. Satisfaction was rated from very dissatisfied, somewhat dissatisfied and neutral to somewhat satisfied and very satisfied. As previously stated, satisfaction is a determinate of guest loyalty and repeat business. Therefore, the results from responses to these measurements can further determine the benefits such as creating guest loyalty and repeat customers, when instituting a sustainability initiative that influences tangible aspects of the service product and the servicescape. Perceptions and outcomes such as guest loyalty were not previously studied; therefore, insight will only be given to the current perception of temperature and air quality and no comparisons will be done with perceptions of these measures before the sustainable instrument was introduced.

From an intangible aspect, a measurement of hotel commitment was taken to further determine if the change in company culture and sustainability mindset has been perceived by guests and to what extent. This measure, combined with the reasoning the hotel has for implementing the sustainable practices, shows the guest's viewpoint on whether they perceive the hotel to be green committed or green washing. By determining the viewed altruistic nature of the hotel, the hotel can then draw conclusions to determine other concerns such as guest behavior and satisfaction and the overall positive or negative reputation of the hotel.

Additional measurements included determining if it is important to customers in the hotel industry to be knowledgeable about sustainable practices and furthermore if this knowledge influences their personal purchase decision, or the decision to choose that particular hotel. Both knowledge importance and influence were determined by guests assessment on a seven point scale, 1= "Not Important" or "Not at All," and 7 = "Extremely Important" or "Very Much."

To further assess the effects of a sustainability program on a guest and also the effects of low promotion, comparisons of both intangible and tangible aspects were done. Doing so helps to better identify perceptions of the service product as a whole under sustainable influence.

Please refer to the appendix for further information on each measurement and the exact survey completed by subjects.

Results

While in reality 11 or more initiatives are implemented at the property, on average hotel guests were aware of between 1-2 and 3-5 practices, with most responses stating awareness of 3-5 sustainability initiatives. With a low promotion level signifying advertising only done by means of 1 medium (a link on the company website), no subject was aware of more than 6-10 practices and 13.5% were not aware that any sustainable practices existed at the hotel.



Of the guests surveyed 56% were not influenced by the hotels sustainability program when choosing where to stay. As seen on the graph, the data is highly skewed to the left showing that most commonly guests marked 1 for their answer, meaning they were not at all influenced.

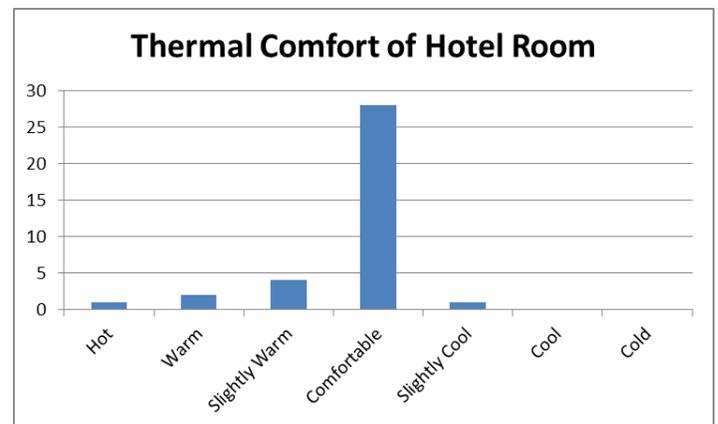
These same guests on average, on a scale of 1 to 7, with 7 being extremely important, rated the personal importance of sustainability in the middle of the scale at 4.13.

With regards to the intention of the hotel in developing a sustainability program, on a scale of 1 to 7, with 7 meaning extremely committed, 94% of all guest surveyed, rated the hotel a 4 or higher, with 1/3 of all responses rating a 6. Additionally, besides responses showing perception of hotel commitment to sustainability, as seen in the chart below, most commonly guests felt that the reasoning behind the implementation was genuine and done to reduce the hotels ecological footprint. Unexpected results show that although the hotel is labeled as low promotion in this study, 50% of guests rated reasoning to be for marketing purposes. 55% also perceived the intention to be for additional marketing reasons such as to attract guests and for the hotel to become more competitive.

<i>Reason</i>	<i># of Responses</i>	<i>Percentage</i>
To reduce their ecological footprint	31	86.11%
To attract guests/be more competitive	20	55.56%
For marketing purposes	18	50.00%
To generate ideas for guests to implement at home	9	25.00%
To make guests aware of global concerns	12	33.33%
To reduce costs	19	52.78%
Total Responses	36	

Note: For this question, guests were allowed to give more than one response.

As previously stated guests were also evaluated to determine the effects of a sustainability initiative and to see how this affected their stay. As shown in the graph on the right, the thermal comfort of the hotel room, rated at the time of completion of the survey, was most commonly considered comfortable by guests.



Additionally, when asked their satisfaction

level with the temperature and relative humidity conditions as well as satisfaction with the air quality in the room, on average, responses were between very satisfied and somewhat satisfied.

The most common response for satisfaction of temperature and humidity was rated very satisfied for 26 out of 36 responses. Air quality was also rated highly at very satisfied, for 67% of subjects.

There is a .55 positive correlation between the personal importance of the green practices and the influence sustainability has on the guests' decision to stay at the hotel. As seen below,

with an alpha less than .05, there is strong significance with F value higher than the F critical

<i>F</i>	<i>P-value</i>	<i>F crit</i>
21.68472	1.43E-05	3.973897

value of 3.97.

It was also found that there is a .25 positive correlation between the amount of green practices that guests are aware of and also their perceived hotel commitment to sustainability.

During a comparison of the measurements, while not strongly correlated, the satisfaction of air quality and influence on purchase decision are also statistically significant with a P value

<i>F</i>	<i>P-value</i>	<i>F crit</i>
4.788953	0.031934	3.97581

less than .05.

Limitations

There are several limitations involved with this study that are mainly based upon both the subject matter, the hotel used and the response rate. Having only obtained 37 usable surveys, there is a constraint on the true impact of this study. While it provides for some statistically significant information, more responses could represent the results and correlations more strongly.

Additionally, the subjects involved only represent the perceptions of guests within this high-end, luxury hotel and cannot necessarily represent all guests within all hotels. It's possible that this study is restricted by this targeted segment of guests and their personal preferences. A future study might reveal that a different segment of guests within the industry are either more or less environmentally conscious than those represented in this study. From this, the advertising of the hotels sustainability program and the guest's knowledge about that program may be of more or less importance, also effecting the hotel property selection and loyalty of the guest.

With regards to the air quality measurement, it was important to the hotel for the guests to include the room number and date on the survey, in case of any strong negative feedback that would require further investigation and maintenance of a room. From this, complete anonymity was omitted and several guests could have been deterred to complete the survey or may not have been completely honest when answering. With additional attention to this measurement, air quality might not have been the strongest determinant of overall satisfaction and one might consider also including a satisfaction or loyalty question in itself.

When determining the awareness of hotel guests about the sustainability program some confusion might have occurred with regards to the LEED certification. Seeing as the certification in itself requires implementation of several practices, guests knowledgeable about the hotels Platinum status, might have be unsure how to count this. Some guests might have counted the LEED certification in itself as 1 sustainable practice that they were aware of, while others might

have grouped some of the hotel initiatives in with requirement of obtaining the certification. Further explanation of how to classify a LEED certification might have been effective or directing guests to identify how many practices they were aware of besides the certification itself. Additionally, without listing the practices themselves, guests could have estimated the number of practices that they were aware of, when in actuality not being aware of that amount. A more detailed measurement, gauging knowledge of the practices themselves could have been a more effective means of determining guest awareness.

Conclusions

Summary of Findings

With low promotion, it was expected that several guests would mark lower numbers for the amount of sustainability practices that they were aware of. Since the actual amount of practices in place at this hotel exceeds the highest evaluation set of 11 or more, this was true seeing as no guests marked higher than 6 to 10. As previously stated within the limitations, lack of clarity with classifying knowledge of the LEED certification and also in ensuring guest awareness could be influential to this measure and the results. However, disregarding this factor and looking at the data, it can be stated that knowledge of a sustainability program was relayed to guests in some way, since the most common response was knowledge of 3 to 5 practices. This could just be the knowledge of the sustainability practices of which are in direct contact to the guest. But with guests finding out in this manner and by minimal effort on behalf of the hotel to promote itself, this could be a determining factor in the reasoning as to why guests believe the hotel has invested in sustainability. While there was a strong response to the negative reasons such as to simply reduce costs or for marketing purposes, guests collectively believed mostly that the hotel implemented these initiatives to reduce their ecological footprint. Seeing as the hotel is of low promotion, a skeptical intuitive response may exist for guests who are aware of previous hotel or businesses partaking in “green washing,” and this may reflect in the somewhat popularity of the negative responses.

We can further infer that the discreet promotion and subtle advertising on part of the hotel has benefited the hotel in conveying an altruistic message to guests. As previously researched and stated, the benefits to corporate social responsibility can lead to increased trust and consequently increased loyalty and business. The only drawback is that while guests have

adopted a more altruistic feel and may partake in these apparent benefits, the scale is two extremes since some guests know of no sustainability initiatives and it therefore, does not affect them nor help the hotel.

From the data collected we can also infer that the subjects examined were not similar to those in previous studies with regards to interest in sustainability. While other studies have shown that consumers are “demanding and pushing companies to go green,” the subjects only classified the importance of knowing about green practices a 4 out of 7. The majority of guests also responded at the lowest rating for the influence that sustainability had on their choice to stay at the hotel. This shows that while there is some interest in sustainability, it is not a determining factor or large consideration among guests looking for a hotel.

In general, this also has changed the perception of clientele from what was originally expected, as it would have been believed that more eco-friendly guests would be attracted to a highly sustainable hotel.

Many strong correlations could not be determined from the data set possibly due to the response rate and also the lack of variation within some of the responses. However, not as new knowledge, it was determined that guests who did not value sustainability also do not consider it when choosing a hotel.

It was determined though, that while not “statistically” significant, there is a positive correlation between the number of practices known by the guest and the hotel’s perceived level of commitment. This might be thought to be a setback to a low promotion hotel; however, the results leave us to think otherwise. Previous research also does not support this as other studies have presented that marketing is a crucial element that builds a more favorable attitude. This study however, has found similar results of favorable attitudes but with minimal promotion. No promotion has worked in favor of the hotel leading to high satisfaction of the servicescape as well as general feelings of altruism.

Additional incentives for the hotel to continue implementing sustainability practices is the ability to offer guests amenities and tangibles that are sustainable and help the environment while still maintaining desired results from guests. From the results in this study, hotel guests were very satisfied with the air quality and temperature of their room and most were comfortable with the overall thermal comfort, both the highest rankings and most favorable results to the hotel. While the previous ambient condition maybe have been of equal satisfaction and comfort to the guest, this proves that while possibly not enhancing a guest experience, implementation of a “sustainable tangible” does not deter from the guest experience either. This further shows positive feedback to sustainable initiatives within a sustainable hotel.

Industry Implications

The above results have several implications useful to both the industry and hotel management. It can be concluded that hotel consumers are interested in sustainability but not to the same degree as consumers from other industries. Additionally, one could further conclude that the pressure felt by hotel companies to go green is not necessarily on behalf of their customers, but instead their competition or the industry as a whole.

It can then be considered what exactly the benefits are and incentives are for a hotel to go green. If guests such as those examined in this studied are not interested in sustainability, as was previously thought, then why should hotels invest in sustainable solutions. The hotel used in this study is proof that business innovations such as an automatic temperature controls in rooms can reduce costs on behalf of the hotel while still maintaining satisfaction among guests.

Advancements such as these that lead to increased corporate social responsibility also lead to business efficiencies where companies can see benefits in other areas. As is commonly known, sustainable business can lead to financial savings, more efficient use of resources and higher productivity as well as several other business benefits.

This study demonstrates that a highly sustainable hotel with no promotion can benefit in areas in addition to business efficiency such as satisfaction and an altruistic reputation. However, as sustainability can be beneficial even among guests who do not have a high concern for sustainability, it can also be detrimental. Research has shown that with regards to service products, satisfaction and dissatisfaction are on separate scales. In terms of sustainability the presence of sustainable initiatives could lead to a minimum of equal satisfaction, as proven in this study, through positive reputation and morale for the hotel along with satisfaction in tangibles and servicescape such as with regards to air quality. The lack of sustainability initiatives may not cause satisfaction to lower. However, less than altruistic reasons for involvement in sustainability could increase feelings on the dissatisfaction scale.

As seen within this study, it's important that hotels present and institute a sustainability program with care, as consumers are skeptical to the true reasoning of implementing these practices. For example, even this hotel incorporating sustainability for benefit of the environment and with minimal promotion is still questioned and thought to be doing it for alternative reasons. For hotels beginning to incorporate sustainability into their business operation, it is important to also consider the true reasoning behind their interest in green business and how they portray this to guests. Guests cannot decipher the true involvement of a hotel in sustainability initiatives and corporate social responsibility, based solely on the advertising and information provided by the hotel. It would therefore be effective to institute an industry set of standards to which guests can refer to in order to measure levels of sustainability.

Future Research

There are various angles to which sustainability and advertising can be further analyzed. Building on this study, future research could detail a more demographic profile of a hotel guest and relate that to sustainability concepts and preferences in terms of target market and guest segment. A study determining which segments are influenced by sustainability practices in hotels and which consider sustainability to be a deciding factor in purchase decision would be beneficial for hotels to know. Hotels could then determine which brands to strongly market their sustainability practices towards and those which are not worthwhile in investing additional resources. Additionally, with the growth of the industry and international brands emerging, different clientele from diverse regions might change the viewpoint of sustainability initiatives. Doing a cross-cultural or location based comparison of the importance of sustainability in the hotel industry would be beneficial research for international companies or those looking to expand. Additionally, broadening this study's measurements to include other factors and initiatives is encouraged.

A future study might also consist of a more in-depth look at different advertising methods that appeal to guests especially in the area of sustainability. Different types of marketing tools could be more effective in conveying the practices at the hotel and creating the positive altruistic feel that hotels desire.

Future research could also be done to evaluate individual sustainability practices and how each is perceived to the customer. Hotels could then determine which practices are giving guests the perception of "green washing" and of less commitment where others such as a LEED certification may hold strong in the minds of the guest that the company is committed, invested and altruistically implementing these initiatives. The number of initiatives might also play a factor where perhaps, a smaller amount of more involved sustainability initiatives holds more

weight than many initiatives of little impact or vice versa. By determining which ones convey a positive image, hotels can then decide which practices to advertise and inform guests about.

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Appendix A: Survey Questions

Sustainability Survey

Q1. How many of the hotel's sustainable /green practices are you aware of?

- 0
- 1-2
- 3-5
- 6-10
- 11 or more

Q2. How much did the hotel's sustainable/green practices influence your choice to stay here? (Circle One)

1 -----2-----3-----4-----5-----6-----7
Not at All Very Much

Q3. How committed do you believe this hotel is to reducing their ecological footprint? (Circle One)

1 -----2-----3-----4-----5-----6-----7
Not Committed Extremely Committed

Q4. How important is knowing about a hotel's sustainable/green practices to you personally? (Circle One)

1 -----2-----3-----4-----5-----6-----7
Not Important Extremely Important

Q5. What reasoning do you believe the hotel has for implementing sustainable/green practices? (Check one that best applies)

- To reduce costs
- To reduce their ecological footprint
- To attract guests by making our hotel look better than our competition
- Generate ideas for guests to implement at home
- To have our guests recommend us

- To make guests aware of global concerns

Additional Data Questions

Q6. What is your opinion regarding the general thermal comfort in your room at this time?

Hot Warm Slightly Warm Comfortable Slightly Cool Cool Cold

Q7. How satisfied are you with the temperature and relative humidity conditions in your room?

Very Satisfied Somewhat Satisfied Neutral Somewhat Dissatisfied Very Dissatisfied

Q8. How satisfied are you with the air quality in your room?

Very Satisfied Somewhat Satisfied Neutral Somewhat Dissatisfied Very Dissatisfied

Q9. Please list any other issues regarding thermal comfort conditions in your room that you would like to communicate to the hotel management.

Appendix B: Hotel Data

<i>Air Quality Satisfaction</i>	
Mean	Very Satisfied- Somewhat Satisfied
Median	Very Satisfied
Mode	Very Satisfied
Minimum	Very Satisfied
Maximum	Neutral

<i>Satisfaction with Temp & Humidity</i>	
Mean	Very Satisfied- Somewhat Satisfied
Median	Very satisfied
Mode	Very Satisfied
Minimum	Very Satisfied
Maximum	Somewhat Dissatisfied

<i>General Thermal Comfort</i>	
Mean	Slightly Warm- Comfortable
Median	Comfortable
Mode	Comfortable
Minimum	Hot
Maximum	Slightly Cool
# of Responses	36

<i>Awareness</i>	
Average Number known	2.486486486
Standard Error	0.126286899
Median	3
Mode	3
Standard Deviation	0.768173216
Sample Variance	0.59009009
Kurtosis	-0.281228837
Skewness	-0.729683663
Range	3
Minimum	0
Maximum	6 to 10
Sum	92
# of Responses	37

<i>Commitment</i>	
Mean	5.19
Standard Error	0.19
Median	5.00
Mode	6.00
Standard Deviation	1.12
Sample Variance	1.25
Kurtosis	-0.83
Skewness	-0.15
Range	4
Minimum	3
Maximum	7
Sum	187
# of Responses	36

<i>Choice of Hotel</i>	
Mean	2.27
Standard Error	0.29
Median	1.00
Mode	1.00
Standard Deviation	1.77
Sample Variance	3.15
Kurtosis	0.78
Skewness	1.27
Range	6
Minimum	1
Maximum	7
Sum	84
# of Responses	37

<i>Personal Importance</i>	
Mean	4.14
Standard Error	0.27
Median	4.00
Mode	4.00
Standard Deviation	1.67
Sample Variance	2.79
Kurtosis	-0.34
Skewness	-0.30
Range	6
Minimum	1
Maximum	7
Sum	153
# of Responses	37

Academic Vita

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Objective:

Senior Honors Thesis

Education:

Bachelor of Science Degree in Hotel, Restaurant and Institutional Management
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Schreyer Honors College
Thesis: Sustainability and Advertising

Semester at Sea, The Institute of Shipboard Education
The University of Virginia, 2010

The University of Puerto Rico, 2008

Related Experience:

Events Department Intern
The Hilton New York
Hilton Worldwide Inc.
Summer 2010

Catering Intern
The Westin Times Square
Starwood Hotels and Resorts Worldwide
December 2009

Rooms Intern
The W New Orleans
Starwood Hotel and Resorts Worldwide
Summer 2009

Awards and Honors:

2011 Recipient of the Health and Human Development Student Excellence Award for
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References:

Excellent references available upon request