



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

PhD in ECONOMICS AND MANAGEMENT

MANAGEMENT CURRICULUM

CICLE XXXII

Department of Economics and Management

University of Padova

Essays on sustainability and routine-redesign in the hospitality industry.

Head of the PhD Program: Prof. Antonio Nicolò

Supervisor: Prof. Andrea Furlan

PhD Candidate: Claudia Cozzio

INTRODUCTION

This PhD thesis consists of a papers' collection focused on a comprehensive investigation of the hospitality industry, adopting a double perspective that accounts for a managerial point of view with a paper focused on routine's dynamics and three papers focused on sustainability, aiming at responding to the latest call for research that the industry is facing.

The management-focused paper addresses the need of furthering the understandings about routine redesign topic. Adopting a novel approach that combines the routine redesign literature with the theoretical body related to rituals, this study presents a rare research that examines the implications of a ritual-based redesign on all the constituent parts of a routine (i.e. ostensive, performative, performance). As the adoption of a ritual-based redesign is particularly salient for routines to which participants tend to attribute symbolic meanings, this study focuses on the dining out sector, since food is often identified as a way for personal, social and spiritual meanings (Thomson and Hassenkamp 2008, Mintz and Du Bois 2002, Harris 1998). Specifically, the empirical examination focuses on manipulating the welcome entrée routine performed every day in an upscale Italian restaurant, identified as a simple and defined routine, particularly suitable to be manipulated due to many symbolic meanings potentially associated with it.

The three papers related to sustainability in hospitality aim at providing an all-embracing conceptualization of the notion of sustainability in hospitality. Firstly, a literature review aimed at reviewing the main literature on sustainability in the hotel industry through the analysis of 142 papers published in eight leading hospitality journals from the year 2000 to the year 2017 was conducted. This paper proposes an in-depth focus on three dimensions of sustainability (i.e. economic, environmental, social), applying the Hotel Sustainable Business Model [HSBM] (Mihalic et al., 2012) as a framework of analysis. Beside dominant research orientations in the field, the findings enable the recognition of research gaps in the literature. For instance, from the findings the topic of local food (belonging to the cultural subcategory in the social dimension of the HSBM) emerges as a promising field of research that can play a vital role in delivering green services to customers (Jang et al., 2011). In fact, the topic of local food remains largely unexplored in hotels because the majority of research efforts have been focused on the analysis of different

sustainable practices in hospitality such as recycling programs, energy efficiency, water conservation, waste management (i.e. Dimara et al., 2017; Chan, 2008, 2004; Mensah, 2006).

The aforementioned research gap has inspired the realization of a study aimed at exploring the impact of green food on consumers' purchase attitudes toward a hotel stay and on consumers' behavioral intentions (i.e. intention to visit the hotel, intention to offer positive recommendations to others and willingness to pay a premium), focusing on an Italian perspective where food is a worldwide famous cultural element. This research employs a survey sent out by email to a database of contacts provided by a local chain that includes potential clients who have asked for a quotation through the company website (from October 2016 to May 2017). The domestic hotel chain was chosen as a set of analysis due to its scarce sensibility to sustainable issues. Hence, the study was performed in a neutral setting in order to guarantee candid responses and to rely on objective customers' opinions not influenced by the stay at the hotels.

This study tests for behavioral intentions, which do not necessarily lead to actual behaviors (i.e. actually purchase a hotel that offers green food). Hence, the limitation of this research has raised the need of furthering the understanding about consumption behavior in response to green food promotional campaigns in a real hotel setting. In addition, since the literature review outlines the concept of food sustainability as encompassing three main components (i.e. organic farming, locally grown food, and environmental sustainability), this study pinpoints the influential power of each specific dimension of greenness in promoting food sustainability as a valuable future stream of research in the hotel industry.

In the light of the aforementioned considerations, an experiment focused on nurturing the consumption of green food was conducted in order to furthering the understanding about how hospitality providers can support the general trend towards green food – defined as organic, local and sustainable – with persuasive messaging. This paper examines the effects of persuasion on actual behavior in a realistic hotel setting, following a between-group quasi experimental design carried out in a four stars holiday-hotel in the Southern Italian region of Apulia during the local summer season 2018. This study advances research on persuasive communication for sustainability by emphasizing that “experiential” appeals are preferable over rational or normative appeals in experience-driven and hedonistic consumption settings such as food consumption on holidays.

All in all, this PhD thesis embodies four papers. The first paper entitled *Ritual-based redesign of routine: an experimental approach in the restaurant industry* adopts a managerial perspective. The other three contributions aimed at providing a comprehensive investigation about sustainability in the hospitality industry with a special focus on the underexplored concept of green food are further reported as follow: (1) *The concept of sustainability in hotel industry: current dominant orientations and future issues*; (2) *Food Sustainability as a Strategic Value Driver in the Hotel Industry*; (3) *Nurturing the consumption of green food: The persuasive strengths of different messages*.

At the end of this thesis, a final section provides several theoretical advancements, managerial implications and future potential streams of research about organizational routine's framework as well as about the up-to-date topic of sustainability in the hospitality.

**Ritual-based redesign of routines:
an experimental approach in the restaurant industry**

Claudia Cozzio

Department of Economics and Management, University of Padova

Address: Via del Santo 33, 35123 Padova, Italy

Email: claudia.cozzio@phd.unipd.it

Prof Andrea Furlan

Department of Economics and Management, University of Padova

Address: Via del Santo 33, 35123 Padova, Italy

Email: andrea.furlan@unipd.it

Abstract

The outcomes of routines' redesign appear conflicting in the literature and scholars highlight the need of furthering its understanding. Adopting a novel approach that combines the routine redesign literature with the theoretical body related to rituals, this paper presents a research examining the implications of a ritual-based redesign on all the constituent aspects of a routine (i.e. ostensive, performative, performance). Our field experiment focuses on manipulating the welcome entrée routine performed every day in an upscale Italian restaurant. The findings show that the ritual-based redesign facilitates the creation of stable ostensive structures by spreading powerful meanings among participants and it reduces the variability of routine's execution by leveraging on invariable sequences of actions. Our study finally provides empirical evidences that such stability contributes to routine's effectiveness, defined as the fulfillment of routine's organizational-specific goals.

Keywords: routine redesign; rituals; routine ostensive; routine performative; routine effectiveness

1. INTRODUCTION

The redesign of routines, defined as an intentional change in the formal structure and elements of a routine (Bapuji et al. 2018), has conflicting outcomes: some scholars state that routines can be redesigned with beneficial results (Salvato 2009, Edmondson et al. 2001), while others emphasize the disruptive consequences of routine redesign processes (McGahan and Mitchell 2007, Helfat 2003).

Literature on this topic appears scant (Zbaracki and Bergen, 2015; Becker 2005) and it traditionally discloses different redesign approaches (e.g. discovery approach, copy-exactly approach) (Gupta et al. 2015; Winter and Szulanski 2001), along with the artifacts either *speaking* (e.g. procedures) or *silent* (e.g. physical tools) used in the redesign process (Cacciatori 2012).

Combining the routine redesign literature with the theoretical body related to rituals, defined as *complex artifacts* (both *silent* and *speaking* in nature), this paper aims at investigating the innovative ritual-based redesign of a routine.

As rituals are repetitive and highly invariable sets of sequential activities that are invested with special meanings (Smith and Steward 2011), the ritual-based redesign involves changing the formal structures of a routine through meaningful and predetermined sequences of actions (Ratcliffe et al. 2019, Hobson et al. 2018).

Moreover, as routines are conceptualized by the interplay between a performative (i.e. the specific actions through which the routine is performed) and an ostensive part (i.e. the abstract pattern of how a routine should be performed) linked as a duality in a recursive relation (Feldman and Pentland 2003), this paper aims at exploring whether the adoption of a ritual-based redesign is associated with an enhanced sharing of the individual schemata underlying the routine's ostensive, a more stable routine's performative and a consequential enhanced routine's effectiveness, defined as the fulfillment of routine's organizational-specific goals (Bapuji et al. 2018).

To the best of our knowledge, this study represents the first attempt in applying rituals' theoretical foundations to the routine dynamics, testing the implications of a ritual-based redesign on all the constituent parts of a routine (i.e. ostensive, performative, performance).

As the adoption of a ritual-based redesign is particularly salient for routines to which participants tend to attribute symbolic meanings, we focus our study on the dining out sector, since food is often

identified as a way for personal, social and spiritual meanings (Thomson and Hassenkamp 2008, Mintz and Du Bois 2002, Harris 1998). Specifically, we conducted our field experiment on the welcome entrée routine performed every day in an upscale Italian restaurant, identified as a simple and defined routine, particularly suitable to be manipulated due to many symbolic meanings potentially associated with it.

Basing on an observation period (11 weeks) where we observed the routine as it proceeded and an intervention period (10 weeks) characterized by the manipulation of the welcome entrée routine in a ritual fashion, this study aims at investigating how the ritual-based redesign is likely to influence specific constituting elements of the ostensive aspect (i.e. the degree of sharing of the individual understandings about why the routine is being performed), the performative aspect (i.e. the variability in the time of execution), and the routine's effectiveness (i.e. guests' enjoyment assessed by food waste).

The findings suggest that the ritual-based redesign enhances the degree of sharing of individual schemata (i.e. understandings about why the routine is being performed) by spreading powerful meanings that encourage participants to internalize a common beliefs' structure (Mazmanian and Beckman 2018, Alcorta and Sosis 2005). Moreover, the routine redesign in a ritual fashion reduces the variability in the execution time of the routine itself since it reduces the likelihood of problems deriving from misinterpretations in the transfer of information (Becker 2004, Camerer and Knez 1996). Both these results appear to have a beneficial impact on the fulfillment of routines' organizational-specific goals (Bapuji et al. 2018), increasing the routine's effectiveness that in our study is understood as the guests' enjoyment at restaurant, measured by a decrease in the edible food waste left in the plate (Antonschmidt and Lund-Durlacher 2019, Juvan et al. 2018, Just and Wansink 2011).

2. THEORY AND HYPOTHESIS

2.1. The concept of routine-redesign: its antecedents and applications

Scholars are increasingly interested in gaining insight into the value that may be gained or lost through the redesign of routines, defined as an intentional change in the formal structure and elements of a routine (i.e. routine blueprint) (Bapuji et al. 2018).

Two key factors emerge from the literature: the context-specific features that lead to the adoption of different redesign approaches and the physical tools (i.e. artefacts) used in the redesign process.

Regarding the context-specific features, scholars mainly focus on how routines are redesigned for their replication, pointing out different redesign approaches. As routines comprise a complex and causally ambiguous set of interdependent elements, Winter and Szulanski (2001) show that the form of the routine that gets replicated is a slowly evolved version of the routine in the prior implementation (i.e. discovery approach). The authors define the Arrow core as the “knowledge of which attributes are replicable and worth replicating, together with knowledge of how these attributes are created” (2001:731) and they posit that the knowledge of the Arrow core is discovered through experiential learning.

In some situations, however, slow evolutions of the routine may be not suitable. In the case where elements of the routine are strongly causally ambiguous and/or interdependent, firms cannot run the risk of a deviation from the known routine and the replicated routine appears identical to the original one (i.e. copy-exactly approach) (Gupta et al. 2015). Intel’s Copy-Exactly approach provides an example where the exact manufacturing process is duplicated at all levels in order to produce similar outputs at all production lines (McDonald 1998). An opposite case occurs when the new context is totally different from the prior implementations. Under these conditions, the routine needs to be fully redesigned prior to being introduced in an entirely new context (Szulanski and Winter 2002). For instance, the rollout of McCafé into specialty Italian-espresso beverages exemplifies the case in which routines’ redesign needs to take into account issues about its consistency in the new context (Gupta et al. 2015).

Along with the context-specific features that lead to different redesign approaches, several studies investigate how individuals intentionally use artefacts either to preserve or change routines (e.g. Turner and Fern 2012, Rerup and Feldman 2011, D’Adderio 2008). Cacciatori (2012) provides a comprehensive framework that explains how artefacts matters for routines, distinguishing between *speaking artefacts* that contain procedures, manuals, reports, technical drawings, and *silent artefacts* which include items such as furniture and tools without any textual or visual representations of knowledge.

Some researchers focus on the use of *speaking artefacts* in formalizing the design of the routine in order to standardize the activities performed by reducing the decision making of participants when performing the routine (D’Adderio 2008, Leidner 1993). Among these scholars, some provide empirical evidences supporting of the beneficial effect of routine redesign through the use of renewed speaking artifacts (Lazaric 2005, Darr et al. 1995), while others suggest that redesign efforts can be acts of “folly”

because changing the formal procedures and rules often fails to achieve the intended results (Parmigiani and Howard-Grenville 2011, Pentland and Feldman 2008).

Little work is done about the use of *silent artefacts*, as their manipulation is more complex (Cacciatori 2012). Bapuji et al. (2012, 2018) provide empirical evidences on the introduction of *silent artefacts* that clearly transmit the intentions of one actor to another and they confirm that this alignment of actions and responses considerably strengthens the routines' outcomes.

Given that previous researches show potential benefits as well as drawbacks associated with routine redesign, a key challenge lies in developing a better understanding about how redesign process influences not only the routine's effectiveness (Bapuji et al. 2018), but also the other constituting parts of a routine.

2.2. The ritual-based redesign of a routine and its pillars

This study aims at furthering the understanding of routines' redesign adopting the innovative perspective of the ritual-based redesign of a routine.

Following Smith and Steward (2011), we define organizational rituals as (1) sets of activities that are invested with special meaning that promotes the affirmation of shared beliefs and values through a combination of formality and symbolism; (2) repetitive and highly invariable sets of sequential activities and (3) acts not necessarily associated with the achievement of instrumental goals since the focus is on the process rather than on the outcome (i.e. goal demotion).

Although all the three features are present in a ritual, they may be weighted differently depending on the context and on the functions served (Hobson et al. 2018). For instance, family rituals during the holiday season may be highly symbolic and meaningful but less rigid (Sezer et al. 2016), whereas when a ritual is related to minimize anxiety (i.e. regulate negative emotion), it may be less meaningful but completely invariant and rule bound (Norton and Gino 2014).

Studying the constituent parts of a ritual, Rook (1985) describes four components that must be present in a ritual: physical objects, scripts stating when and how different actions take place, roles for actors participating in the ritual and an audience in front of whom the ritual occurs. Physical objects and scripts function as symbols of the meaning communicated through rituals (Ratcliffe et al. 2019).

In our study, we consider rituals as *complex artifacts*, both silent (i.e. physical objects) and speaking (i.e. scripts) in nature, that encompass physical (e.g. rigid, repetitive action sequences) as well as psychological features (i.e. the user must interpret the ritual to give it a meaning) (Hobson et al. 2018). In particular, as rituals are often associated with the idea of self-transcendence and sanctity with strong links to religion (Bell 1997), the meaning inherent in rituals lies beyond the overt (Bird and Smith 2005). For instance, a habit and a ritual action might appear identical in structure, but the ritual is different because it is imbued with a sense of meaning, whereas the habit is not (Hobson et al. 2018).

Traditionally, routines have been defined as repetitive, recognizable patterns of interdependent actions, enacted by multiple actors (Feldman and Pentland 2003). Feldman and Pentland (2003) conceptualize routines as the interplay between a performative (i.e. the specific actions through which the routine is performed) and an ostensive part (i.e. the abstract pattern of how a routine should be performed), aspects that are linked as a duality in a recursive relation, with each shaping the other. Hence, the performative aspect is essential for the creation and recreation of the ostensive aspect, while the ostensive aspect constrains and enables the performative (Miller et al. 2012).

This study aims at investigating how the ritual-based redesign is likely to influence specific constituting elements of the ostensive aspect (i.e. the degree of sharing of the individual understandings about why the routine is being performed) and of the performative aspect (i.e. the variability in the time of execution of the routine) that create a routine, and how this particular redesign influences the effectiveness of the routine.

We now analyze the emerging three distinctive traits of rituals in detail (i.e. special meaning, invariable sequence of actions, goal demotion) and develop some hypothesis on the relationship between these traits and key concepts of the theory of organizational routines.

2.2.1. *Special meanings and the ostensive aspect of routines*

The concept of special meaning emerges as an essential ritual's characteristic. In fact, although all rituals involve manifest actions, the proper level of the analysis is in the underlying meanings of those actions (Islam and Zyphur 2009).

In particular, rituals may be seen as discrete events that work to create an organizational culture by establishing public interpretations for interpersonal behaviours (Schein 2004). Rituals emerge as powerful forces for the expression and affirmation of shared beliefs and values (Jong et al. 2015, Whitehouse and Lanman 2014), the presence of which encourages group stability and harmony (Koschmann und McDonald 2015).

Since rituals rely on shared basic assumptions that determine their meaning to the group, they may enhance the commitment of participants to the group as means of in-group affiliation (Watson-Jones and Legare, 2016) and they may facilitate coordinated and cooperative group actions (Cosmides and Tooby 2013) that help to maintain group cohesion, since people can think similarly and act as a group (Páez et al. 2015).

Considering the redesign of a routine, the fact that rituals due to their special meaning promote the affirmation of shared beliefs and values, that in turn enhance group cohesion, appears to have a direct impact on the individual schemata that in the routine parlance are the constituent elements of the ostensive aspect of the routine (Feldman and Pentland 2003).

Feldman and Pentland (2003) suggest that the ostensive aspect should not be considered as a “single and unified” entity, “because the ostensive incorporates the subjective understandings of diverse participants” (Feldman and Pentland, 2003:101). These individual understandings, or schemata, are defined as individual understandings about organizational members’ role and contributions to the joint activity and, collectively, they constitute the microfoundations of the ostensive aspect of the routine (Rerup and Feldman 2011, Dionysiou and Tsoukas 2013).

Although schemata are developed at the individual level, scholars argue that members of organizations can share schemata (Bartunek 1984). According to researches on social cognition (Fiske and Taylor 1991), when participants interact, they develop through abstraction and generalization individual schemata, but as experience with the joint activity accumulates, each participant abstracts and generalizes not simply from personal schemata but also from schemata that have been jointly established (Sandberg and Targama 2007). The outcome of this process of abstraction and generalization is the development of schemata by each participant that are at least partially shared among participants (Gray et al. 1985).

The term shared schemata refer to individual schemata that “are, at minimum, compatible or congruent supplying participants with mutually consistent interpretations and evaluations of information, as well as with reciprocal expectations concerning what actions are appropriate for the situation they face” (Dionysiou and Tsoukas 2013:193). Hence, shared schemata are defined as a set of shared assumptions (Balogun and Johnson 2004), values (Gioia, et al. 1994) and frames of reference (Bartunek 1984) that give meaning to everyday activities and guide how organizational members think and act (Elsbach et al. 2005).

As shared schemata are developed with repetitive experience in the context of the joint activity and become more organized and elaborate over time (Fiske and Taylor 1991), they increasingly supply participants with more guidance, diminishing the amount of uncertainty surrounding the routine. Through this recurrent process, the ostensive aspect of the routine is formed, which participants recognize as a shared, objective reality (Birnholtz et al. 2007) that guides future routine performance by supplying organizational members with a *model of* and *model for* enacting the routine (Pentland and Feldman 2007).

In our study, we consider the individual understandings about “why the routine is being performed” (Feldman and Rafaeli 2002:316) that are related to “the reasons for performing the routine” (Feldman and Rafaeli 2002:322) as a proxy to describe and capture an important part of the individual schemata.

Since rituals rely on shared beliefs and values that enhance in-group affiliation (Schein 2004) which, in turn, support the sharing of individual schemata among participants, we hypothesize that the introduction of a ritual-based redesign increases the sharing of the individual understandings about why the routine is being performed compared to the status quo (i.e. the routine without the introduction of the ritual-based redesign).

Hence, the following hypothesis is proposed:

HP1: The ritual-based redesign increases the sharing of the individual understandings about why the routine is being performed among the members performing the routine.

2.2.2. *Invariable sequence of actions and the performative aspect of routines*

Rituals must be executed in a prescribed manner (Smith and Steward 2011) and this feature emphasizes their invariability (Hobson et al. 2018). A specified and invariable sequence of actions restricts

the ritual's actions to rigid boundaries (Sosis and Alcorta 2003) and since rituals have to be enacted following a prescribed and specified temporal order (Smith and Stewart 2011), we argue that they decrease the variability in the work processes that embody the sequence of actions by which organizations transform inputs to outputs (Pentland 2003). This strongly influences the performative aspect of the routine, defined as the specific actions enacted by specific people, at specific times, in specific places (Feldman and Pentland 2003).

Rituals introduce standards that reduce the variability in the participants actions, enabling them to know - without having to think about it - how specific tasks fit together into the “who, what, when and where” of the routine (Turner and Rindova 2012) and to align their actions appropriately (Dionysou and Tsoukas 2013).

In our study, we focus on the variability in work processes as a particular aspect of the performative part of routines (Pentland, 2003). Through the use of speaking and silent artifacts, rituals introduce repetitive and highly invariable sets of sequential activities to create and recreate the underlying social meaning associated to their implementation. These artifacts reduce the variability of the routines in two ways. First of all, they freeze a sequence of actions that cannot change each time the routine is enacted. Following Pentland (2003: 529), “if work processes are defined as sequences of actions, then variability in work processes can be conceptualized as differences in the sequences”. Second, rituals freeze the time it takes to perform each action of the standard sequence. Each action has to be performed following strict protocols and standards both in terms of how the activity is performed and in terms of the time that it takes to perform the activity.

Both the standardization of the sequence of activities and the standardization of each activity within the sequence, should reduce the variability of the time that it takes to enact the whole routine each time. Through our field experiment in the dining out context, we expect that the introduction of a ritual-based redesign decreases the variability of the routine's execution compared to the status quo (i.e. the routine without the introduction of the ritual-based redesign).

Coherently, we postulate the following hypothesis:

HP2: The ritual-based redesign reduces the variability in the time of execution of the routine.

2.2.3. *Rituals and the effectiveness of routines*

As we argued in the previous section, meaningful actions introduced by rituals support the creation of shared schemata, the presence of which provides a learning foundation for routine participants, with greater clarity regarding how they should perform their roles in the routine as well as how other participants should perform their roles (Danner-Schröder and Geiger 2016, Dionysiou and Tsoukas 2013). This selectively support collective actions that are aligned to stable abstract patterns of actions. Stable abstract patterns of actions enable participants to better guide their actions (Dionysiou and Tsoukas 2013) and standard sequences of actions facilitate the coordination among participants, reducing the likelihood of problems deriving by misinterpretations in the transfer of information (Becker 2004, Camerer and Knez 1996).

Scholars find empirical evidences that the presence of shared and stable abstract pattern of actions contributes to routines' effectiveness, defined as the extent to which the routine results in outcomes that achieve the aims defined by the organization for the routine itself (Bapuji et al. 2018, Cyert and March 1963). For example, Mazmanian and Beckman (2018) analyze budgeting as a ritual of quantification able to instill in the middle managers a shared belief in the objective authority of numbers. The ritualization of the budget process “fosters collective solidarity and an underlying belief in the objective authority of numbers to motivate action, assess success, and drive continuous organizational growth” (Mazmanian and Beckman 2018:357). Conversely a lack of shared understanding of the abstract pattern of routines leads to an increase of conflicts and a reduction of the routines' effectiveness. Studying the pricing adjustment routine as a dispute between marketing and sale forces, Zbaracki and Bergen (2010) show that the conflict arising from different routines' understandings not only threatens the routine's functioning but also the solidity of the whole organization.

The creation of shared understandings of the abstract pattern of a routine is also facilitated by the fact that in rituals actions are not necessarily associated with the achievement of specific instrumental goals (i.e. goal demotion) since the focus is on the execution of the process rather than on its outcome (Legare and Souza, 2012). For instance, in ritual washing the specific wiping gestures become the focus of attention instead of the cleaning of the object (Boyer and Lienard 2006).

The focus on the proper execution of gestures substantiates the fact that, when engaging in rituals, participants intensify their joint attention and coordinate their behavioral synchrony, generating perceptions of unity and cohesiveness (Hobson et al. 2018, Alexander 2004).

By facilitating the creation of shared schemata and meanings among routines' participants and leveraging on invariable sequences of actions, we expect that rituals reduce the likelihood of conflicts and problems deriving from misinterpretations and provide the participants with a better and shared guide to their actions thus increasing the routine's effectiveness compared to the status quo (i.e. the routine without the introduction of the ritual-based redesign).

Hence, we hypothesize the following:

HP3: The ritual-based redesign leads to a higher routine's effectiveness

3. RESEARCH METHODOLOGY

3.1. *The setting*

Field experiments appear suitable to supplement theories as they enable researchers to test ideas and hypotheses in real-world settings, thus providing a more practical outlook (Harrison and List 2004).

In this paper we present a field experiment in the dining out sector. We focus on the dining out sector because connections between food and rituals are often addressed by scholars in the literature (Ratcliffe et al. 2019). First, food is often identified not only as a source of physiological sustenance but also as a way for personal, social and spiritual meanings (Thomson and Hassenkamp 2008, Mintz and Du Bois 2002, Harris 1998). Examples are related to coffee consumption described as a 'ritualistic pursuit of leisure' (Quintão et al. 2017:484), the involvement in a birthday cake ritual of steps that convey special meanings regarding positive hopes for the year ahead (Rossano 2012), the ritualistic procurement and preparation of specific foods for a Thanksgiving table (Wallendorf and Arnould 1991). Second, humans transform eating into a symbolic system of meaning where the meaning of food is derived from what the food is, how it is prepared, who provided the food (Mol 2011). In other words, taste does not just occur in the food itself, but also in the surroundings and those that serve the food affect the eaters' experience (Plester 2015). Third, Fox (2003) observes that the order of food consumption during a meal appears strongly associated with a ritual, such as eating savory foods before a sweet dessert in a traditional Western meal. A change in this pattern of behavior

would destabilize the ritual: eating dessert at the start of a meal would be considered unusual and incorrect (Ratcliffe et al. 2019).

We conduct our study on the welcome entrée routine performed every day in an upscale restaurant situated in the north-east of Italy. As per restaurant's policy, the guests are welcomed in the restaurant with an entrée. The welcome entrée routine is identified as particularly suitable for the field experiment due to the following reasons: (1) it comprises few actions and its simplicity allows to overcome many of the methodological challenges related to the study of the routines, such as difficulties in the identification due to limited observability and subjectivity in their description (Becker et al. 2005); (2) it is easy to be manipulated in a field experiment which affords the benefits of experimental control, while also improving realism of conditions for study participants (McGrath 1995); (3) many symbolic meanings can potentially be associated with the welcome entrée routine (e.g. provide a warm welcome, instill immediately a sense of staff friendliness); (4) it has a powerful effect in nurturing the priming effect (Davis and Herr 2013) and, consequently, in influencing the whole consumption experience as it represents the first course served.

The experimental setting is an independent restaurant run by an entrepreneur who manages the restaurant daily and he lives literally a block away from the restaurant. The restaurant opened for business in 1990 and it serves lunch and dinner. The restaurant has a medium-high price point menu, ranging on average on € 50 for a complete meal including the beverages.

The menu changes two times a year to match seasonal dishes (Spring-Summer vs Autumn-Winter) and the changes typically involve ten to twelve plates over a menu of 28 different items including appetizers (7), first courses (7), second courses (9) and desserts (5). The ambiance is elegant with 80 seats and the customers are generally established professionals and businessmen. The restaurant is managed by the entrepreneur who is the restaurant general manager and his wife in charge of the cash desk. They own the restaurant in equal parts. The staff consists largely of employees with high seniority with an average experience of 11 years. There are 16 full-time employees in total.

Consistently with the research on routines' dynamics (Bapuji et al. 2018), we started our field experiment with the *familiarization* stage in order to develop a deep understanding of how the welcome entrée routine was normally enacted. During this stage we (i) conducted interviews with the entrepreneur and his wife as equal shareholders of the restaurant, (ii) observed the waiters during every dinner for a period of

one week (7th-14th March 2018), sitting separately in two little tables located at the beginning and the end of the dining room, (iii) conducted follow-up semi-structured interviews with all the 16 full-time employees (15th-17th March 2018).

We conducted two telephone interviews with the entrepreneur and his wife during the week before our arrival at the restaurant. The first interview was focused on understanding in details the background of the restaurant (e.g. restaurant's history, the number and profiles of the employees, the food proposal), while the second interview aimed at presenting the purpose of the project together with its specific phases.

The observation period, during which detailed field notes were taken, ranged from four to five hours per day from 7.00 p.m. to the end of the service, depending on the volume of customers. Our presence was anticipated by the entrepreneur to the whole staff some days before our arrival and it was explained as a part of an improvement project focused on enhancing guests' experience at the restaurant. Hence, the staff was not informed about the real purpose of the study (Bapuji et al. 2018). Therefore, we were presented to the restaurant's employees as external professionals invited by the entrepreneur.

The day of our arrival (6th March 2018), at the end of the service (11.30 p.m.), after having introduced us to the staff, the entrepreneur also mentioned to the employees the entire length of the project (twenty-one consecutive weeks), the fact that they would have been actively involved in the project by participating in face-to-face interview sessions and questionnaire responses, and the fact that an intense training day (Monday 4th June 2018 – restaurant day off) would have been scheduled with the aim of introducing a change in the way of serving the welcome entrée. Moreover, the entrepreneur revealed to the whole staff that we would have participated as observers to several dinners during some weeks within the project duration. We assured that individual performances of the waiters were not being monitored or evaluated in any way. In addition, the owner mentioned to the employees that for twenty-one consecutive weeks starting from 20th March 2018 the edible plate waste related to the welcome entrée as well as to the whole meal (i.e. appetizers, first course, second course, dessert) would have been put respectively in two separate big bowls, instead of being thrown away directly. At the end of every dinner the bowls would have been weighted either by the entrepreneur or by the authors. Finally, the entrepreneur emphasized that the whole project had been requested as an internal necessity of change and improvement.

From the *familiarization* stage, we developed field notes focusing on the actions that constitute the performative aspect of the welcome entrée routine (Pentland and Feldman 2003). The data gathered from the observation period revealed that the welcome entrée routine encompassed five steps: (1) waiters welcome guests and guide them to the seating (2) waiters present guests with the menu and ask for which type of water they prefer (3) waiters serve water and ask for orders of food as well as of beverages beside water (4) waiters serve beverages (5) waiters serve the “welcome entrée” saying “This is an entrée offered by the chef to welcome you at our restaurant”. Generally, the whole sequence lasts 17 minutes on average.

Typically, the welcome entrée changes two times a year for the Spring-Summer season and for the Autumn-Winter season (i.e. March-August; September-February) and it is decided autonomously by the chef according to the seasonality and the menu. During the field experiment the entrée consisted of two different items: a cheese mousse seasoned with herbs and a creamy potatoes soup topped with two little slices of salmon (Img. 1).

INSERT IMAGE 1 HERE

3.2. The experiment

Our experiment consisted in redesigning part of the welcome entrée routine performed during dinners in an upscale restaurant of the North-east Italy. We chose the dinner as the only time period suitable for performing the field experiment. The reasons were mainly related to the fact that at lunch time the restaurant proposed daily special food offerings at a discounted price, beside the traditional menu proposal. In addition, most of the customers at lunch were in hurry because they had short and scheduled breaks before going back to work. Furthermore, visitors may have different food and time requirements when dining out at lunch compared to other meal consumption occasions (i.e. dinner), with a consequent effect on customer food choice and customer state of mind (Xu et al. 2019). Consequently, we decided to run the experiment only during dinners in order to preserve the homogeneity of the experimental setting.

The whole field experiment ran within twenty-one consecutive weeks from 20th March 2018 to 12th August 2018. After having observed the welcome entrée routine for a period of 60 days (20th March 2018 - 31 May 2018, excluding Italian holiday days: 2nd April Easter Day, 25th April Italian Anniversary of Liberation, 1st May Labour Day and every Monday as weekly restaurant day of), we run together with the entrepreneur an intense training day (Monday 4th June 2018 – restaurant day off) to educate the employees in

the redesigned welcome-entrée routine. After the training day, we engaged in the observation of the ritual-based redesign of the welcome entrée routine for a period of 60 days (5th June 2018 - 12th August 2018), excluding every Monday as weekly restaurant day off.

The training day¹ was held in the restaurant and it was divided in two sessions: the 9 waiters attended both sessions, whereas the 7 chefs joined the morning session only. The training day was also scheduled for the chefs as they were involved in the routine for the physical preparation of the entrée.

During the morning session (10 a.m. – 13 p.m.), the entrepreneur explained that the aim of the training day was to learn a new way to perform the welcome entrée routine in order to enhance the guests' experience at the restaurant. We explained the new detailed sequence of actions that needed to be performed by showing power-point slides previously prepared.

The changes mainly involved (i) predetermined sequence of actions and verbal instructions, (ii) fixed body gestures, (iii) symbolic meaning. First, we trained the waiters to serve the welcome entrée specifying to the guests to follow a specific order of consumption, tasting firstly the potatoes soup and secondly the cheese mousse. The taste sequence for the two items was decided autonomously by the chef for a matter of balance of flavors. As a result of the redesign of the routine, the waiters needed to present the welcome entrée as follows (the explanation started after having served all the guests) “This is an entrée offered by the chef to welcome you at our restaurant. In order to enjoy the entrée, mix for few seconds the pieces of salmon together with the soup and taste it first. Then, eat the cheese mousse”. We also emphasized the role of the voice volume and its cadence as elements that corroborate the ritual-based redesign of the welcome entrée routine. Second, we trained the waiters to perform the sequence of actions by following a precise set of movements that consists in indicating with the right hand firstly the potatoes soup and secondly the cheese mousse, after having served all the guests and while they were presenting the specific food items (e.g. the correct distance between the hand and the plate was 15 cm). In addition, specific movements of the head were also defined in order to get the eye-contact of every guests during the performance, according to the

¹ Although other field experiments tried to avoid the presence of the management to reduce biases related to perceived monitoring and evaluation by participants (Bapuji et al. 2018), the training day was led by the entrepreneur together with the authors. On the one hand, the presence of the entrepreneur was coherently justified by his role as the main proponent of the whole project that follows a logic of company's improvement. On the other hand, the participation of the authors provided clear guidelines about the implementation of the project, supporting on a scientific basis the proposed ritual-based redesign of the welcome entrée routine.

number of guests (e.g. look at each client for 5 seconds in a table of 4 guests). Since specific movements are strongly associated with the definition of a ritual compared to random gestures (Vohs et al. 2013, Le Billion 2012, Visser 1992), we put emphasis on avoiding any form of gestures' randomization. Third, the ensuing ritual-based routine was strongly associated with symbolic meanings communicated to the waiters. As a general premise, when consuming food the rigidity and the repetition of a ritual in preparing the eating experience emphasize the attention to the food item, thereby increasing motivation towards savoring the food (Hobson et al. 2018). Literature shows that consumers who engage in ritualistic consumption behaviors (e.g. predetermined sequence of tasting: "first the potato soup, second the cheese mousse") report that the specific product has better performance than consumers who eat the same product with no ritual associated to it (Vohs et al. 2013). Moreover, since a delay between a ritual and the opportunity to consume the product enhances the pleasure of consumption (Amati and Pestana 2015, Förster et al. 2007), the detailed verbal instructions explained by the waiters on how tasting the entrée strengthened the pleasure of consumption.

All in all, the three main features that constitute a ritual (1) symbolic value (psychological); (2) invariable sequence of actions (physical); (3) goal demotion were the foundations for the ritual-based redesign of the welcome entrée routine. First, a greater pleasure and enjoyment in guests consumption experience at the restaurant was the symbolic meaning conveyed to the waiters as a reason why performing the proposed ritual-based redesign of the welcome entrée routine. Second, the waiters needed to adopt a prescribed and fixed temporal order in serving the welcome entrée to the guests (e.g. taste first the potato soup, then the cheese mousse; detailed verbal and gestures instructions about how taste the food items). Third, when engaging in rituals, the focus was on the correct execution of the whole sequence rather than on the outcome (Legare and Souza 2012, Boyer and Lienard 2006). During the training day, strong emphasis was given to the proper execution of the gestures (e.g. actions, voice volume, eye-contact) performed in serving the welcome entrée.

The afternoon session (15 p.m. – 17 p.m.) was on the real training. The participants were divided into three groups each of three employees while one of the authors and the restaurant's owners (the entrepreneur and his wife) acted as restaurant guests, sitting in three different dining tables of the restaurant. The tables were set up for the event with one cover each. The participants performed the redesigned routine several times and after every 40 minutes they had to switch to another guest. The day after the training day

(5th June 2018), the waiters started to perform the ritual-based redesigned routine with the normal guests at the restaurant.

4. RESULTS

4.1. *Rituals and the degree of sharing of the individual understandings*

To test the first hypothesis (i.e. The ritual-based redesign increases the sharing of the individual understandings about why the routine is being performed among the members performing the routine) we analyze the staff members' understandings about "why the routine is being performed or the purpose of the routine" (Feldman and Rafaeli, 2002:321). This level of understandings involves the broad reasons for why particular actions are appropriate or inappropriate (Feldman and Rafaeli 2002, Bourdieu 1990). Hence the *why* understandings are related to "the reasons for performing the routine" (Feldman and Rafaeli, 2002:322).

Following the suggestions provided by Pentland (2003) and Feldman and Pentland (2005), we used semi-structured interviews to analyze the individual understandings about why the routine is being performed as a constituting element of the ostensive aspect of the routine. The interviews included the waiter staff as well as the cooking staff. Both cooks and waiters are involved to bring the routine welcome entrée to life (Metiu 2006). The interview process encompassed two different phases.

4.1.1. *First phase: categorizing individual understandings about why the routine is being performed*

In the first phase, we aimed at categorizing the individual understandings about why the welcome entrée routine was being performed. We adopted a "why" interview technique (Erhardt 2016, Schwandt 2000). Sample questions included: why do you serve a welcome entrée to the customers? what is the purpose of this activity? what are the results that you expect from this activity? One of the authors interviewed each routine's participant of waiters' staff (9 employees) as well as cooking's staff (7 employees). Semi-structured interviews ran from 15th March to 17th March 2018 (i.e. the days before the beginning of the observation period) and typically lasted between 15 and 25 minutes on average for each participant (Table 1). Field notes taken during the interviews were transcribed within a day of each interview.

INSERT TABLE 1 HERE

Interviews were digitally transcribed to retrieve verbatim quotations that were further employed to support the arguments developed in the write up of the study results. A thematic framework was devised to categorize and analyze the outcome of the interviews (Table 2). The process of coding data includes looking for themes defined by DeSantis and Ugarizza (2000) as abstract entities that bring meaning and identity to a recurrent experience. We adopted an open coding procedure (Miles and Huberman 1994, Strauss and Corbin 1990) that includes making comparisons for similarities and differences between quotations and grouping the similar ones to form categories.

INSERT TABLE 2 HERE

From the coding activity, seven categories related to different individual understandings emerge: (1) generate customer's astonishment, (2) let the customer felt at ease, (3) prepare the customer for a greater tasting experience of the whole meal, (4) instill an immediate atmosphere of familiarity, (5) logistics reasons, (6) increase the customer's overall satisfaction, (7) prepare the customer's palate for savoring the following course. We assigned different codes to the abovementioned categories: (1) ASTONISHMENT, (2) COMFORT), (3) EXPERIENCE, (4) FAMILIARITY, (5) LOGISTICS, (6) SATISFACTION, (7) SAVOR. Table 3 shows some quotations from the interviews that are related to the different understandings.

INSERT TABLE 3 HERE

4.1.2. *Second phase: measuring the consensus within and between groups*

In the second phase, we developed a structured questionnaire based on the categories emerged from the first phase. Each member of the waiter staff and of the cooking staff was asked to repeat the same questionnaire twice, one at the end of the observation period (20th March 2018 – 31st May 2018) and one at the end of the intervention period (5th June 2018 – 12th August 2018). At the beginning of the service on Saturday 26th May 2018 and on Saturday 4th August 2018 (day in which all the employees were present), the entrepreneur asked to every employee to fill the questionnaire and to give it back to him by the same day.

Respondents were asked to prioritize the seven categories related to the individual understandings emerged from the first phase by ranking them in order of importance. The output was a personal rank of individual understandings that ranges from the first position that represents the most important reason for performing the routine to the seventh position as the least important reason about why the routine is being

performed. We use the responses to assess the degree of consensus within and between groups (cooks and waiters) employing the methodology developed by Tarakci et al. (2014).

4.1.2.1. *Mapping within-group consensus*

To obtain a measure of the degree of consensus within-group, Tarakci et al. (2014) employ a vector model for unfolding (VMU) (Borg and Groenen 2005). This approach is the same as that used in principal component analysis (PCA) with the transposed data matrix, which places the respondents in the columns as variables and the items (i.e. understandings why the routine is being performed) in the rows as cases.

Let \mathbf{H} be the data matrix with m rows (i.e. understandings about why the routine is being performed) and n columns (respondents). \mathbf{H} must be standardized so that all individuals have equal weight in the VMU. Consequently, the VMU in p dimensions is equivalent to minimizing the sum of the squared errors $\|\mathbf{E}\|^2$ for \mathbf{H} and the low dimensional representation $\mathbf{X}\mathbf{A}'$; that is,

$$L_{\text{VMU}} = \|\mathbf{H} - \mathbf{X}\mathbf{A}'\|^2 = \sum e^2_{ij}.$$

where \mathbf{X} is an $m \times p$ matrix of the object scores for the m rows of the first p components and \mathbf{A} is an $n \times p$ matrix of component loadings. In two-dimensional space, the results of the VMU can be represented using a biplot in which the rows of \mathbf{X} (i.e. the object scores of the understandings about why the routine is being performed) are represented as points and the rows of \mathbf{A} (i.e. the component loadings of the respondents) are depicted as vectors (Gower and Hand 1996).

Figure 2 and Figure 3 show several visual features that are associated with the resulting biplot representation of the VMU solution, developed through the software Wolfram Mathematica (The raw data matrix is presented in Appendix-Table A1). To correctly interpret the results the following key points are fundamental: (1) as the cosine of the angle between two respondents is an approximation of their pairwise correlation (Linting et al. 2007, Rodgers and Nicewander 1988), respondents with small angles between their vectors have a similar opinion of the understandings about why the routine is being performed, (2) the spread of all the vectors determines the degree of within-group strategic consensus: vectors grouped in a tight cluster show a high degree of within-group consensus, whereas a wide distribution of vectors indicates a low degree of within-group consensus, (3) the orthogonal projection of an item onto a respondent's vector

indicates the respondent's ranking for that particular item. The closer an item is projected onto the vector (the projections are shown with a dashed line), the higher the respondent prioritizes the item. Moreover, as the first vector can be interpreted as the 'prototypical group' member who best represents the entire group's opinion, the orthogonal projections of items onto the first axis represent the group's overall view, (4) the length of a vector indicates how well a respondent is represented, where a length of 1 indicates a perfect fit. In our study all the respondents fit well because nearly all of them have vectors with a length that is close to 1.

Figure 1 shows the biplots of the waiter staff in the situation pre and post treatment. Basing on the projections of the items (i.e. understandings about why the routine is being performed) onto the first axis, *Comfort*, *Familiarity* and *Experience* are the top three priorities for the waiter staff in the situation pre treatment, while they rank *Logistics*, *Satisfaction* and *Savor* as the least important. After the ritual-based redesign introduction, we can see that waiters consider *Experience* the most important item followed by *Comfort* and *Astonishment*, whereas the items valued the least remain unchanged. The increase in priority of *Experience* signals the fact that after the treatment the waiters become more sensitive towards the guests' evaluation of the tastiness of the whole meal. Moreover, we observe that the respondent vectors in the post treatment situation are a tighter cluster than those in the pre-treatment situation, showing a high degree of within-group consensus.

INSERT FIGURE 1 HERE

Figure 2 shows the biplots of the cooking staff in the situation pre and post treatment. We can see that before the treatment the cooking staff considers *Logistics*, *Experience* and *Astonishment* the top three prioritizations, whereas *Familiarity*, *Comfort* and *Savor* are valued the least. After the treatment we observe that the prototypical group member prioritizes *Experience* the highest, followed by *Logistics* and *Savor*, while *Astonishment*, *Satisfaction* and *Familiarity* have the lowest priority. In addition, as vectors are grouped in a tighter cluster in the post treatment situation, there is a higher degree of within-group consensus compared to the pre-treatment situation. The increase in priority of *Experience* and *Savor* after the treatment shows that also cooks strengthened positive role of the welcome entrée in influencing the taste of the whole meal and in savoring the following courses as a result of the redesign of the routine.

From this preliminary observation, the prioritizations of the understandings about why the welcome entrée routine is being performed appear more aligned and shared within the waiter as well as within the cooking staff after the treatment.

INSERT FIGURE 2 HERE

Following Tarakci et al. (2014), we adopt also an additional measure for assessing the degree of within-group consensus. A new α measure of the degree of within-group consensus is defined by the length of the average component loading vectors of the unrotated VMU solution; that is,

$$\alpha = \sqrt{\sum_{p=1}^2 (m^{-1} \sum_i \alpha_{ip})^2}$$

where α_{ip} is the p^{th} component loading for respondent i ($i = 1, \dots, n$). The α measure takes values between 0 and 1 depending if the vectors are spread out or close together in a tight group. For the waiter staff, we observed that the respondent vectors in the post-treatment situation were a tighter cluster than those in the pre-treatment condition, showing that the degree of within-group consensus post-treatment ($\alpha = 0.44$) is greater than that in pre treatment ($\alpha = 0.41$). Consequently, we conclude that after the treatment the waiters have more consensus regarding the relative importance of the understandings about why the routine is being performed. Also for the cooking staff the degree of within-group consensus is slightly higher (α pre = 0.48; α post = 0.49). Overall, the α value around 0.50 indicates a moderate degree of within-group consensus (Tarakci et al. 2014).

4.1.2.3. Mapping between-group consensus

Following Tarakci et al. (2014), we adopt a correlational measure of the degree of between-group consensus that is derived from the within-group VMU object scores of the items (i.e. understandings about why the routine is being performed). Since the first axis can be interpreted as the prototypical group's member who represents the group's overall opinion, the correlation between the prototypical members of the two groups captures the measure of their between-group consensus. The measure $r(A, B)$ is operationalized as the correlation of the object scores of the items on the first axis for two groups, A and B . To obtain a visual

mapping for between-group consensus, classical multidimensional scaling (MDS) is used. Figure 3 shows the MDS plot of the two groups in question in the situation pre and post treatment (The correlation matrix used to generate Figure 3 is presented in Appendix-Table A2). Our graphical representation places the cooking staff in the center of the MDS plots. Following Tarakci et al. (2015), we use ten rings around the cooking staff that represent the correlational distance to the cooking staff, ranging from 0.9 to 0. The distance between the bubbles represent the degree of consensus between groups. The size of the bubbles represents the degree of within-group consensus for each group (α) and the rings around the bubbles displays the potential size of a bubble if a group achieves perfect consensus ($\alpha = 1$).

The situation after treatment shows a higher level of consensus about the prioritizations of the understandings about why the routine is being performed. Indeed, after the treatment the correlational distance progressively decreases, showing more aligned interpretations between the two groups. Even if the prioritizations of the understandings about why the routine is being performed between the two groups remain different after the treatment (since the cooking staff valued the most *Logistics* and *Savor* while the waiter staff prioritized *Astonishment* and *Comfort*), the common increase in priority of *Experience* in both groups shows that a shared understanding of the welcome entrée routine started to emerge.

INSERT FIGURE 3 HERE

4.2. Rituals and the variability in the time of execution

To test the second hypothesis (i.e. The ritual-based redesign reduces the variability in the time of execution of the routine), we measured the variability of the time of execution to perform the welcome entrée routine before and after the treatment.

The data were collected during the fourth week (10th-15th April), the seventh week (2nd-8th May [excluding 1st May Labour Day], and the tenth week (22nd-27th May) of the observation as well as of the intervention period (26th June-1st July, 17th-22nd July, 7th-12th August) for a total of 18 days of data collection during each period.

The time measurement started from the moment in which the customers enter the door of the restaurant and it ended when the waiters leave the guests' table, after having served the welcome entrée. The

whole sequence of actions lasted approximately 17 minutes. The measurement started at 7 p.m., time of restaurant's opening for dinner, and it lasted until the end of the service at about 11.30 p.m.

The restaurant has 80 seats that are generally distributed in tables with 4 seats (i.e. 17 tables of 4 seats and 4 tables of 3 seats). A total of 21 tables are available in the restaurant and they can be combined according to the volume of the customers as well as specific needs (e.g. group of 3 couples).

One of the authors and a research assistant sat separately in two small tables located oppositely at the extreme side of the dining room and they were respectively responsible for the first part of the dining room (table's number from 1 to 10) and for the remaining area of the dining room (table's number from 11 to 21).

As per restaurant's policy, each waiter was responsible for the service of approximately 3 tables and specific numbers of tables were assigned to each waiter. Since each observer focused on a specific area of the restaurant, each of them measured the execution time of the same group of waiters. Small exceptions occurred mostly during weekends when more often it happened to combine tables together (e.g. to accommodate groups of families).

The first phase (i.e. before the ritual-redesign introduction) yielded 488 observations for a total of 1.746 guests, while the second phase (i.e. after the ritual-redesign introduction) yielded 500 observations for a total of 1.718 guests.

The second hypothesis predicts that the ritual-based redesign reduces the variability in the time of execution among the members performing the routine. Results showed in Table 4 support this hypothesis since variability of time of execution, measured by the standard deviation of the time (minutes) spent in performing the welcome entrée routine before the treatment ($SD=2,58$) is greater than the standard deviation of the time spent in performing the welcome entrée routine after the treatment ($SD=1,94$). Hence, during the intervention period the time of execution appears less variable and more stable than in the observation period.

Moreover, results of the one-way ANOVA (Table 5) show that the number of guests per table and the percentage (over the total number observations) that a specific waiter performed the routine weren't significantly different in the two phases (i.e. observation period and intervention period) proving a substantial homogeneity among the observation and intervention periods.

INSERT TABLE 4 HERE

INSERT TABLE 5 HERE

4.3. *Rituals and the routine's effectiveness*

To test the third hypothesis (i.e. The ritual-based redesign leads to a higher routine's effectiveness), we measured the extent to which the ritual-based redesign increases the achievement of the intended outcome that in our experiment is the enjoyment of the guests' food consumption experience at the restaurant.

In order to assess the guests' food consumption experience, we weighted the edible food waste per person. This measure is widely used in the restaurant management literature (Antonschmidt and Lund-Durlacher 2019, Juvan et al. 2018, Just and Wansink 2011). In fact, a greater enjoyment in the food consumption experience leads to a reduction of the food waste (Dolnicar et al. 2015, Vohs et al. 2013).

Starting from 20th March 2018, the edible plate waste related to the welcome entrée as well as to the whole meal (i.e. appetizers, first course, second course, dessert) had been put respectively in two separate big bowls, instead of being thrown away directly. At the end of every dinner, we collected the weight of the food waste of the welcome entrée as well as of the whole meal (appetizer, first course, second course, dessert). Specifically, either one of the authors or the entrepreneur weighted the edible food that could be eaten, but was left on the plate. We excluded inedible food waste (e.g. bones). The total food waste was divided by the number of customers on any given day to obtain the food waste per person per day in grams.

The whole period yielded 120 observations, equally distributed in 60 observations during the observation period (20th March 2018-31st May 2018) and 60 observations during the intervention period (5th June 2018-12th August 2018). As Table 6 shows, the average food waste per person per day respectively related to the welcome entrée and to the whole meal is 4.07 grams and 16.16 grams in the observation period, and 3.49 grams and 15.17 grams during the intervention period. The results of the one-way ANOVA also show whether the mean values differ significantly between the two phases (i.e. observation period and intervention period). The data show that the grams of the food waste related to the entrée as well as to the whole meal are significantly different between the two phases.

Moreover, data shows the *average expense* (for every given day data regarding the guests' average expense related to the food as well as to the beverage was obtained from the restaurant database) and the

guest typology (adult female, adult male, children). Guest typology was detected through direct observation and the relative information were reported and transcribed daily by the entrepreneur's wife responsible for the cashier. On average, across the 120 observations, restaurant's guests did not differ significantly in terms of average expense of the food and the beverage and in terms of their typology.

INSERT TABLE 6 HERE

We also run two linear regression models in order to test the third hypothesis. Food waste in grams related to the welcome entrée (Table 7) and to the whole meal (Table 8) are used as dependent variables. A dummy variable labelled *treatment* that outlines the presence or absence of the ritual-based redesign of the routine, daily guests' average expense related to food and to beverages, daily numbers of female guests, male guests and children (baseline) serve as explanatory variables in the two regression models.

Considering the edible food waste related to the entrée (Table 7), the coefficient estimate for *treatment* indicates that the observed average food waste (grams) of the welcome entrée during the intervention period (i.e. after the introduction of the ritual-based redesign) is 0.56 grams lower than the corresponding average waste (grams) during the observation period (i.e. before the introduction of the ritual-based redesign). T-test has a *p* value equal to 0.001, indicating a markedly significant effect.

Since the welcome entrée is the first course served, we considered also the potential effect that the ritual-based redesign may have on the whole food consumption experience. As shown in Table 8, the coefficient estimate for *treatment* indicates that the observed average food waste (grams) of the whole meal during the intervention period is 0.99 grams lower than the corresponding average waste (grams) during the observation period. T-test has a *p* value smaller than 0.05, indicating a significant effect.

The results support the hypothesis that the introduction of a ritual-based redesign leads to a higher routine's effectiveness.

INSERT TABLE 7 HERE

INSERT TABLE 8 HERE

4.4. Follow-Up Interviews

As a way to follow-up our results, after the intervention period, we conducted semi-structured interviews with nine waiters. The interviews took place from 10th September 2018 to 13th September 2018 in the restaurant at the end of the lunch time (from 2 p.m. to 4 p.m.).

We conducted these interviews after almost one month from the ending of the field experiment to give time to the participants to reflect and interiorize what happened and to obtain more candid and spontaneous responses. During the interviews, we asked questions about the way in which the welcome entrée routine was performed before and after the introduction of the ritual-based redesign. We also asked to the waiters their opinions and general impressions about the effects of the introduction of the ritual-based redesign on themselves and their social group. We made notes following the interviews.

Interviews unveiled that a sense of collective solidarity or *communitas* (Islam and Zyphur 2009) was achieved during the intervention period, encouraging emotional commitment of participants. As one waiter noted “[*after the treatment*] I was strongly involved in the new way of serving the welcome entrée and I perceived that also the others were committed as well. We spoke intensively, almost every day, about the new way of serving the entrée and I think that the mere fact of speaking about something has reinforced our commitment to the activity and it has strengthened even more our commitment to each other”.

Another waiter emphasized the transformative power of the ritual-based redesign in changing disparate inputs into a collective output and in giving consistency about the expectations on other participants’ behaviors: “I basically have been serving the welcome entrée to the guests as it was a restaurant policy and I have never asked to myself why was I performing that activity. The change in the way of serving helped me in thinking about the meanings underlying this activity. Few months have passed from the introduction of the new way of serving the welcome entrée and now it seems to me that we are all on the same page about the underlying meanings of this activity. I think that we have been grown professionally as a group during this time. [...] We got closer also with the cooking staff, sharing our feelings and thoughts about that introduction. As we kept talking together, we understood clearly also their point of views and this has opened my mind. I guess that also for the majority of my colleagues is the same.”

Another waiter pointed out an increase in personal self-esteem and a new awareness of his personal role: “[*the treatment*] has contributed in feeling myself more important in and for the company. I have been feeling important for the role that I played in the restaurant and I clearly understood the relevance of the welcome entrée phase as being our “business card”. I also perceived that the guests looked at me as an expert and they were more willing to ask me random questions about particular pairings during the courses. I felt as

an experienced source.” Emphasizing the effects of the ritual-based redesign on the personal role, one waiter stated: “Our role gained authority. The guests recognized it and the entrepreneur made it happen.”

In addition, the intervention period significantly contributes to increase the importance of the activity itself: “[*after the treatment*] Everybody is following a more comprehensive and complete way of serving the welcome entrée and it has increased the importance of this phase in our tasks. I realized that the activity of welcoming the guests should be the most relevant as it is the first one and all the other tasks are dependent from this one.”

In addition, interviews suggested that the ritual-based redesign gave more self-confidence in the execution of the activity. As one waiter remarked: “When I heard from my boss the necessity of innovating the way of serving the welcome entrée, his proposal sounds weird to me. But day by day I felt more confident about how I needed to behave as having a specific model in my mind”. This point of view was strongly confirmed by most interviewees who emphasized the presence of rigid boundaries that constrain the activity into a predetermined frame and structure during the intervention period. The ritual-based design guided them to adopt a precise way of execution in serving the entrée that reduced the variability in the performative aspect.

Finally, from a pragmatic point of view, the ritual-based redesign had the effect of reducing the questions from the customers about the entrée because they were more curious and focused on tasting the entrée, following the sequence suggested by the waiters. The clients had less doubt about what to do. As a waiter remarked “Usually the clients asked questions when we served the welcome entrée such as “What are we going to eat?” even if it was frequently obvious what the food was. Now the clients show less doubts probably because we explain immediately what they are going to eat”.

5. DISCUSSION

5.1. Theoretical implications

The first contribution of this paper is emphasizing the transformative power of rituals (Smith and Stewart 2011), defined as *complex artifacts* both silent and speaking in nature, to effectively implement a routine redesign and productively guide participants’ actions. To the best of our knowledge, this study represents the first attempt that tests the effects of a ritual-based redesign of a routine. We measured these

effects on all the constituent elements of the routine (i.e. ostensive, performative, performance) and this represents a novelty in the literature as prior researches mainly analyze the impact of redesign processes only on routine's effectiveness (Bapuji et al. 2018, Mazmanian and Beckman 2018, Zbaracki and Bergen 2010). Given the transformative properties of rituals (Smith and Stewart 2011, Turner 1969), we show that the redesign of a routine in a ritual fashion is a virtuous attempt.

All our hypotheses are supported, implying that the ritual-based redesign enhances the degree of sharing of the individual understandings about why the routine is being performed, it reduces the variability in the execution time of the routine, and it improves the routine's effectiveness. Our findings show that rituals enhance the degree of sharing of individual schemata about why the routine is being performed corroborating the argument that rituals induce emotions and deep engagement that encourage participants to internalize a common beliefs' structure (Mazmanian and Beckman 2018, Sosis and Alcorta 2013). In the intense experience of performing rituals, people take on a deeper commitment to their meanings, from which shared schemata are generated. Richert et al (2005) show that participants with stronger emotional reactions to rituals also experience stronger levels of meaning reflections. Rituals also reduces the variability of the performative aspect of a routine (Pentland 2003). The fact that rituals must be executed following invariable sequences of actions restricts members' actions to rigid boundaries (Sosis and Alcorta 2003) facilitating the coordination among participants. Both these effects reduce the likelihood of problems deriving from misinterpretations in the transfer of information, reduce potential conflicts among organizational members and lead to a higher routine's effectiveness. All in all, rituals emerge a strong transformative tool of routines dynamics.

The second contribution of our study lies on exploring how organizations can institutionalize collective learning by leveraging on the ritual-based redesign of routines. In our study, rituals emerge as strong mechanisms (or artifacts) that guide participants' behaviors, strengthening the association between values and actions. Smith and Stewart (2011) emphasize that rituals act as communications and learning systems by drawing attention to what is important and helping to guide thoughts, feelings and behaviors. Rituals serve as emotional anchors for social solidarity (Islam and Zyphur 2009) and beliefs (Morris et al. 1998), allowing the expression and affirmation of collective values and group stability (Turner 1969). Rituals encourage communication, including the transmission of encoded messages, by strengthening memory and

reinforcing communities (Sosis and Alcorta 2003). The redesign of a routine based on rituals facilitates the implementation of a collective learning pathway, intrinsic in the routine's essence: "The routinization provides an ideal learning pathway, delivering a stable product through a standardized formula" (Smith and Stewart 2011:128). As rituals act as powerful communications and learning mechanisms (Smith and Stewart 2011), they facilitate the development of participants' connections that enable them to create shared understandings about why the routine is being performed and about what specific actions need to be taken in precise instances of the routine (Feldman and Rafaeli 2002). With its strong emphasis on collective learning, the ritual-based redesign reinforces the collective (or organizational) nature of routines supporting the sharing of participants' schemata (included in the ostensive aspect) and the generation of coherent and coordinated lines of individual action (included in the performative).

The third contribution of our study is incorporating rituals into our understanding of the mechanisms that guide the internal dynamics of routines. Feldman and Pentland (2008:302) suggest that understanding "how stability and change are achieved" is the principal aim of the dynamic perspective of routines, because routines are systems that have the capacity to produce a wide variety of performances depending on the conditions (Pentland and Feldman 2005, Feldman and Pentland 2003, Feldman 2000, Pentland and Reuter 1994). Islam and Zyphur (2009) suggest that rituals serve to simultaneously satisfy an organization's need for stability and for transformation.

Our analysis of the redesign of the welcome entrée routine provides empirical evidence on how a ritual-based redesign represents both a transformational and a stabilizing role for the organization. On the one hand, the ritual-based redesign maintains stability by instilling a sense of *communitas* (Islam and Zyphur 2009), spreading shared basic meanings in the group (Schein 2004). On the other hand, the ritual-based redesign facilitates a transformation of the individuals involved in the routine by shaping both their cognition and their actions of serving the welcome entrée. Not only they become more committed both to the process and to the outcome of the routine in question, but they also strengthen their role by acquiring more self-esteem. All in all, organizational rituals foster "change within stability" (Islam and Zyphur 2009) since changes in individual roles and actions reinforce the stability of the routine as a collective entity.

5.2. Managerial implications

Prior researches emphasize that ritualized behaviors can be best understood as both an input and output of organizational culture, channeling social interactions and behavioral customs (Anand and Watson 2004, Beyer and Trice 1993, Pedersen and Sorensen 1989). A number of studies demonstrate that rituals are used to stimulate innovation (Jassawalla and Sashittal 2002), to shape identities (Coyne and Mathers 2011), to influence responses to environmental changes (Boyer and Lienard, 2006), to challenge dominant values (Islam and Zyphur 2009) and to reduce uncertainty (Knuf 1993).

Since the restaurant industry is traditionally associated with high stress, long hours, low employee commitment and high turnover (Madera et al. 2013), the investigation of mechanisms through which core values can be shared and reinforced seem critical and challenging to be implemented in the field (Durand et al. 2007). Several studies in the dining out context examine rituals from a consumer perspective as marketing tools (Visser 2015, Osman et al. 2014). Customer-based rituals specifically linked with restaurant contexts may include singing happy birthday to a guest while presenting a cake and a lit candle, personalizing the check with a thank-you message from the waiters, or dining at the chef's table (Gardner and Wood 1991). These examples of restaurant rituals are directed towards customers to develop a relationship and to enhance the guests' experience (Otnes and Lowrey 2004).

We shift the focus away from customers and adopt the employees' perspective. Shifting the focus away from customers as the primary audience of the employees' performance to a value-driven phenomenon centered on the employees' actions represents a novelty in the literature. Following Ernhardt et al. (2016), individuals learn how to perform the ritual itself and, while performing the ritual, they also learn to recognize the underlying value as to why they are performing the ritual. The materialization of the organizational culture through participation and learning of core values represents an important outcome of rituals and a source of competitive advantage (Ernhardt et al. 2016). The ritual-based redesign of routines can therefore operate as a mechanism to develop an organizational culture characterized by strong and shared values that guide new and existing employees' behaviors in a more efficient and less time-consuming way providing the foundation for the competitive advantage of the firm.

6. LIMITATIONS AND FUTURE RESEARCH

Our research is not exempt from limitations, and a number of critical issues remain to be explored by future research.

First, our study is based on an industry and country where welcome entrée routines are very common. Therefore, the generalizability of our findings to other industries and countries cannot be readily inferred. Applications in other industries and contexts can further the understandings about the replicability of the ritual-based redesign approach.

Second, consumption rituals around food and drinks have the potential to deliver positive change at an individual level by increasing consumer enjoyment (Dohle et al. 2014, Vohs et al. 2013) as well as at a social level by developing meaningful bonds between small-group members (Hobson et al. 2018, Thomson and Hassenkamp 2008, Wansink and van Kleef 2013). As dining behaviors in fast-food restaurants differ from consumption experience in restaurants (Xu et al. 2019), this study suffers from the limitation of being based on a single field experiment conducted in a upscale restaurant, thus restringing the applicability of the findings to a niche within the restaurant industry. Future studies can investigate wider range of restaurants (i.e. upscale, casual dining, self-service), increasing the variability of the guest mix and of the menu characteristics, in order to further our understandings about the potential of consumption rituals to generate positive changes at individual and social level across different types of restaurants.

Third, despite its vibrancy, routines research is still “a long way from having an authoritative textbook for students in professional training who want to know how to create effective organizational routines, or how to modify them when they could be still better” (Cohen 2007:774). We hope that the innovative perspective of the ritual-based redesign that we advance will help to analyze the topic of routine redesign, emphasizing its impact not only on routine’s effectiveness (Bapuji et al. 2018, Mazmanian and Beckman 2018), but also on the other constituting elements of the routine (i.e. ostensive, performative).

REFERENCES

- Alcorta CS, Sosis R (2005) Ritual, emotion, and sacred symbols. *Hum. Nat.* 16(4):323-359.
- Alexander J (2004) Cultural Pragmatics: Social Performance between Ritual and Strategy. *Sociol. Theor.* 22(4):527-573.
- Amati F, Pestana F (2015) Consumption rituals: A strategic marketing framework. *Econom. Stud.* 2:229-246.
- Anand N, Watson MR (2004) Tournament Rituals in the Evolution of Fields: the Case of the Grammy Awards. *Acad. Manage. J.* 47(1):59-80.
- Balogun J, Johnson G (2004) Organizational restructuring and middle manager sensemaking. *Acad. Manage. J.* 47(4):523-549.
- Bapuji H, Hora M, Saeed A, Turner S (2018) How Understanding-Based Redesign Influences the Pattern of Actions and Effectiveness of Routines. *J. Manage.* 45(5):2132-2162.
- Bapuji H, Hora M, Saeed AM (2012) Intentions, Intermediaries, and Interaction: Examining the Emergence of Routines. *J. Manage. Stud.* 49(8):1586-1607.
- Bartunek JM (1984) Changing Interpretive Schemes and Organizational Restructuring: The Example of a Religious Order. *Admin. Sci. Quart.* 29(3):355.
- Becker MC (2004) Organizational routines: A review of the literature. *Ind. Corp. Change* 13(4):643-677.
- Becker MC (2005) The concept of routines: some clarifications. *Camb. J. Econ.* 29(2):249-262.
- Becker MC, Lazaric N, Nelson RR, Winter SG (2005) Applying organizational routines in understanding organizational change. *Ind. Corp. Change* 14(5):775-791.
- Bell C (1997) *Ritual: Perspective and dimensions* (Oxford University Press).
- Beyer JM, Trice HM (1993) How an organization's rites reveal its culture. *Organ. Dyn.* 15(4):5-24.
- Birnholtz JP, Cohen MD, Hoch SV (2009) Is it the 'Same'? Observing the Regeneration of Organizational Character at Camp Poplar Grove. *Organ. Sci.* 18(2):315-332.
- Bird R, Smith E (2005) Signaling Theory, Strategic Interaction, and Symbolic Capital. *Curr. Anthropol.* 46(2):221-248.
- Borg I, Groenen P (2005) *Modern Multidimensional Scaling: Theory and Applications* (Springer-Verlag: New York).
- Boyer P, Liénard P (2006) Precaution systems and ritualized behavior. *Behav. Brain Sci.* 29(6):635-641.
- Cacciatori E (2012) Resolving Conflict in Problem-Solving: Systems of Artefacts in the Development of New Routines. *J. Manage. Stud.* 49(8):1559-1585.
- Camerer C, Knez M (1996) Coordination, Organizational Boundaries and Fads in Business Practices. *Ind. Corp. Change* 5(1):89-112.
- Cohen MD (2007) Reading Dewey: Reflections on the Study of Routine. *Organ. Stud.* 28(5):773-786.
- Cosmides L, Tooby J (2013) Evolutionary Psychology: New Perspectives on Cognition and Motivation. *Annual Rev. Psych.* 64(1):201-229.
- Coyne CJ, Mathers RL (2011) Rituals: An economic interpretation. *J. Econ. Behav. Organ.* 78(1-2):74-84.
- Cyert RM, March J (1963) *A Behavioral Theory of the Firm* (Englewood Cliffs, New York).
- Danner-Schröder A, Geiger D (2016) Unravelling the Motor of Patterning Work: Toward an Understanding of the Microlevel Dynamics of Standardization and Flexibility. *Organ. Sci.* 27(3):633-658.
- Darr ED, Argote L, Epple D (1995) The Acquisition, Transfer, and Depreciation of Knowledge in Service Organizations: Productivity in Franchises. *Manage. Sci.* 41(11):1750-1762.
- Davis DF, Herr PM (2013) From Bye to Buy: Homophones as a Phonological Route to Priming. *J. Consum. Res.* 40(6):1063-1077.

- DeSantis L, Ugarriza D (2000) The Concept of Theme as Used in Qualitative Nursing Research. *Western J. Nurs. Res.* 22(3):351-372.
- Dionysiou DD, Tsoukas H (2013) Understanding the (Re)Creation of Routines from Within: A Symbolic Interactionist Perspective. *Acad. Manage. Rev.* 38(2):181-205.
- Dohle S, Rall S, Siegrist M (2014) I cooked it myself: Preparing food increases liking and consumption. *Food Qual. Prefer.* 33:14-16.
- Dolnicar S, Coltman T, Sharma R (2015) Do Satisfied Tourists Really Intend to Come Back? Three Concerns with Empirical Studies of the Link between Satisfaction and Behavioral Intention. *J. Travel Res.* 54(2):152-178.
- Durand R, Rao H, Monin P (2007) Code and conduct in French cuisine: Impact of code changes on external evaluations. *Strateg. Manage. J.* 28(5):455-472.
- D'Adderio L (2008) The performativity of routines: Theorising the influence of artefacts and distributed agencies on routines dynamics. *Res. Policy* 37(5):769-789.
- Edmondson AC, Bohmer RM, Pisano GP (2001) Disrupted Routines: Team Learning and New Technology Implementation in Hospitals. *Admin. Sci. Quart.* 46(4):685.
- Elsbach KD, Barr PS, Hargadon AB (2005) Identifying Situated Cognition in Organizations. *Organ. Sci.* 16(4):422-433.
- Ernhardt N, Martin-Rios C, Heckscher C (2016) Am I doing the right thing? Unpacking workplace rituals as mechanisms for strong organizational culture. *Int. J. Hosp. Manag.* 59:31-41.
- Feldman MS (2000) Organizational Routines as a Source of Continuous Change. *Organ. Sci.* 11(6):611-629.
- Feldman MS, Pentland BT (2003) Reconceptualizing Organizational Routines as a Source of Flexibility and Change. *Admin. Sci. Quart.* 48(1):94.
- Feldman MS, Pentland BT (2008) Routine Dynamics. *The Sage handbook of new approaches in management and organization*:302-317.
- Feldman MS, Rafaeli A (2002) Organizational Routines as Sources of Connections and Understandings. *J. Manage. Stud.* 39(3):309-331.
- Fiske ST, Taylor S (1991) *Social Cognition* (2nd ed. New York: McGraw-Hill).
- Fox R (2003) Food and eating: An anthropological perspective. *Social Issues Research Centre*:1-21.
- Förster J, Liberman N, Friedman RS (2007) Seven Principles of Goal Activation: A Systematic Approach to Distinguishing Goal Priming From Priming of Non-Goal Constructs. *Pers. Soc. Psychol. Rev.* 11(3):211-233.
- Gardner K, Wood RC (1991) Theatricality in food service work. *Int. J. Hosp. Manage.* 10(3):267-278.
- Gioia DA, Thomas JB, Clark SM, Chittipeddi K (1994) Symbolism and Strategic Change in Academia: The Dynamics of Sensemaking and Influence. *Organ. Sci.* 5(3):363-383.
- Gower J (1996) *Biplots* Hand D, ed. (Chapman & Hall: London).
- Gray B, Bougon M, Donnellon A (1985) Organizations as constructions and deconstructions of meaning. *J. Manage.* 11:83-98.
- Gupta A, Hoopes DG, Knott AM (2015) Redesigning routines for replication. *Strateg. Manage. J.* 36(6):851-871.
- Harris M (1998) *Good to eat: Riddles of food and culture* (Prospect Heights, IL: Waveland Press).
- Harrison G, List J (2004) Field experiments. *J. Econ. Lit.* 42(4):1009-1055.
- Helfat CE (2003) Stylized facts regarding the evolution of organizational resources and capabilities. In C.E. Helfat (Ed.), *The SMS Blackwell Handbook of Organizational Capabilities*: 1-11. Malden, MA: Blackwell.
- Hobson NM, Schroeder J, Risen JL, Xygalatas D, Inzlicht M (2018) The Psychology of Rituals: An Integrative Review and Process-Based Framework. *Pers. Soc. Psychol. Rev.* 22(3):260-284.
- Islam G, Zyphur MJ (2009) Rituals in Organizations. *Group Organ. Manage.* 34(1):114-139.

- Jassawalla AR, Sashittal HC (2002) Cultures that support product-innovation processes. *Acad. Manage. Executive* 16(3):42-54.
- Jong J, Whitehouse H, Kavanagh C, Lane J (2015) Shared Negative Experiences Lead to Identity Fusion via Personal Reflection. *PLoS ONE* 10(12):e0145611.
- Just DR, Wansink B (2011) The flat-rate pricing paradox: conflicting effects of “all-you-can-eat” buffet pricing. *Rev. Econ. Stat.* 93(1):193-200.
- Juvan E, Grün B, Dolnicar S (2018) Biting Off More Than They Can Chew: Food Waste at Hotel Breakfast Buffets. *J. Travel Res.* 57(2):232-242.
- Knuf J (1993) “Ritual” in Organizational Culture Theory: Some Theoretical Reflections and a Plea for Greater Terminological Rigor. *Ann. Int. Comm. Ass.* 16(1):61-103.
- Koschmann MA, McDonald J (2015) Organizational Rituals, Communication, and the Question of Agency. *Manage. Comm. Quart.* 29(2):229-256.
- Lazarcic N (2005) Routinization and memorization of tasks in a workshop: the case of the introduction of ISO norms. *Ind. Corp. Change* 14(5):873-896.
- Le Billion K (2012) *French kids eat everything: How our family moved to France, cured picky eating, banned snacking, and discovered 10 simple rules for raising happy, healthy eaters* (New York, NY: William Morrow).
- Legare CH, Souza AL (2012) Evaluating ritual efficacy: Evidence from the supernatural. *Cognition* 124(1):1-15.
- Leidner R (1993) *Fast Food, Fast Talk* (University of California Press).
- Linting M, Meulman JJ, Groenen PJF, van der Kooij AJ (2007) Nonlinear principal components analysis: Introduction and application. *Psychol. Methods* 12(3):336-358.
- Lund-Durlacher D, Antonschmidt H (2019) Towards a Framework for Sustainable and Responsible Food Operations in the Holiday Context and Implementation Approaches in the Travel Industry. *Corp. Sust. Resp. Tour.* 327-341.
- Madera JM, Dawson M, Neal JA, Busch K (2013) Breaking a communication barrier the effect of visual aids in food preparation on job attitudes and performance. *J. Hosp. Tour. Res.* 37(2):262-280.
- Mazmanian M, Beckman CM (2018) “Making” Your Numbers: Engendering Organizational Control Through a Ritual of Quantification. *Organ. Sci.* 29(3):357-379.
- McDonald CJ (1998) The Evolution of Intel’s Copy EXACTLY! Technology Transfer Method. *Intel Technology Journal.* Fourth Quarter.
- McGahan AM, Mitchell W (2007) How do firms change in the face of constraints to change? Toward an agenda for research on strategic organization. *Strateg. Organ.* 1(2):231-239.
- McGrath JE (1995) Methodology matters: Doing research in the behavioral and social sciences. *Readings in Human-Computer Interaction.* Morgan Kaufmann:152-169.
- Metiu A (2006) Owning the Code: Status Closure in Distributed Groups. *Organ. Sci.* 17(4):418-435.
- Miles M, Huberman A (1994) *Qualitative data analysis: An expanded sourcebook* (SAGE: London, Thousand Oaks).
- Miller KD, Pentland BT, Choi S (2012) Dynamics of Performing and Remembering Organizational Routines. *J. Manage. Stud.* 49(8):1536-1558.
- Mintz SW, Du Bois CM (2002) The anthropology of food and eating. *Ann. Rev. Anthropol.* 31:99–119.
- Mol A (2011) Tasting Food. *A Companion to the Anthropology of the Body and Embodiment*:467-480.
- Morris JS, Öhman A, Dolan RJ (1998) Conscious and unconscious emotional learning in the human amygdala. *Nature* 393(6684):467-470.
- Norton MI, Gino F (2014) Rituals alleviate grieving for loved ones, lovers, and lotteries. *J. Exp. Psychol. Gen.* 143(1):266-272.
- Osman H, Johns N, Lugosi P (2014) Commercial hospitality in destination experiences: McDonald’s and tourists’ consumption of space. *Tour. Manage.* 42:238-247.

- Otnes C, Lowrey T (2004) *Contemporary Consumption Rituals: A Research Anthology* (Taylor & Francis, New York).
- Parmigiani A, Howard-Grenville J (2011) Routines Revisited: Exploring the Capabilities and Practice Perspectives. *Acad. Manage. Ann.* 5(1):413-453.
- Pedersen J, Soresen J (1989) *Organisational Cultures in Theory and Practice*. (Aldershot: Gower).
- Pentland B, Feldman M (2005) Organizational routines as a unit of analysis. *Ind. Corp. Change* 14(5):793-815.
- Pentland BT (2003) Sequential Variety in Work Processes. *Organ. Sci.* 14(5):528-540.
- Pentland BT, Feldman MS (2008) Designing routines: On the folly of designing artifacts, while hoping for patterns of action. *Inf. Organ.* 18(4):235-250.
- Pentland BT, Feldman MS (2007) Narrative Networks: Patterns of Technology and Organization. *Organ. Sci.* 18(5):781-795.
- Pentland BT, Rueter HH (1994) Organizational Routines as Grammars of Action. *Admin. Sci. Quart.* 39(3):484-510.
- Plester B (2015) Ingesting the organization: The embodiment of organizational food rituals. *Cult. Organ.* 21(3):251-268.
- Páez D, Rimé B, Basabe N, Wlodarczyk A, Zumeta L (2015) Psychosocial effects of perceived emotional synchrony in collective gatherings. *J. Pers. Soc. Psychol.* 108(5):711-729.
- Quintão RT, Brito EPZ, Belk RW (2017) The taste transformation ritual in the specialty coffee market. *Revista de Administracao de Empresas* 57(5):483-494.
- Ratcliffe E, Baxter WL, Martin N (2019) Consumption rituals relating to food and drink: A review and research agenda. *Appetite* 134:86-93.
- Rerup C, Feldman MS (2011) Routines as a Source of Change in Organizational Schemata: The Role of Trial-and-Error Learning. *Acad. Manage. J.* 54(3):577-610.
- Richert R, Whitehouse H, Stewart E (2005) Memory and analogical thinking in high-arousal rituals. *Mind and religion: Psychological and cognitive foundations of religiosity*:127-145.
- Rodgers J (1988) Thirteen ways to look at the correlation coefficient Nicewander W, ed. *Am. Stat.* 42(1):59-66.
- Rook DW (1985) The Ritual Dimension of Consumer Behavior. *J. Consum. Res.* 12(3):251.
- Rossano MJ (2012) The essential role of ritual in the transmission and reinforcement of social norms. *Psychol. Bull.* 138(3):529-549.
- Salvato C (2009) Capabilities Unveiled: The Role of Ordinary Activities in the Evolution of Product Development Processes. *Organ. Sci.* 20(2):384-409.
- Sandberg J, Targama A (2007) *Managing Understanding in Organizations* (London: SAGE).
- Schein E (2004) *Organizational culture and leadership* (3rd ed. Jossey-Bass, San Francisco).
- Schwandt T (2000) Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics, and social constructionism. *Handbook of qualitative research* 2:189-213.
- Sezer O, Norton MI, Gino F, Vohs KD (2016) Family Rituals Improve the Holidays. *J. Assoc. Cons. Res.* 1(4):509-526.
- Smith ACT, Stewart B (2011) Organizational Rituals: Features, Functions and Mechanisms. *Int. J. Manage. Rev.* 13(2):113-133.
- Sosis R, Alcorta C (2003) Signaling, solidarity, and the sacred: The evolution of religious behavior. *Evol. Anthropol.* 12(6):264-274.
- Strauss A, Corbin J (1990) *Basics of Qualitative Research* (SAGE: London).
- Szulanski G, Winter S (2002) Getting it right the second time. *Harvard Bus. Rev.* 80:62-69.
- Tarakci M, Ates NY, Porck JP, van Knippenberg D, Groenen PJ, de Haas M (2014) Strategic consensus mapping: A new method for testing and visualizing strategic consensus within and between teams. *Strateg. Manage. J.* 35(7):1053-1069.
- Thomson D, Hassenkamp AM (2008) The social meaning and function of food rituals in healthcare practice: An ethnography. *Hum. Rel.* 61(12):1775-1802.

- Trice HM, Beyer JM (1984) Studying Organizational Cultures Through Rites and Ceremonials. *Acad. Manage. Rev.* 9(4):653-669.
- Tsoukas H (1996) The firm as a distributed knowledge system: A constructionist approach. *Strateg. Manage. J.* 17(S2):11-25.
- Tsoukas H, Chia R (2002) On Organizational Becoming: Rethinking Organizational Change. *Organ. Sci.* 13(5):567-582.
- Turner SF, Fern MJ (2012) Examining the Stability and Variability of Routine Performances: The Effects of Experience and Context Change. *J. Manage. Stud.* 49(8):1407-1434.
- Turner SF, Rindova V (2012) A Balancing Act: How Organizations Pursue Consistency in Routine Functioning in the Face of Ongoing Change. *Organ. Sci.* 23(1):24-46.
- Turner V (1969) *The Ritual Process: Structure and Anti-Structure* (Chicago, IL: University of Chicago Press).
- Visser M (1992) *The rituals of dinner: The origins, evolution, eccentricities, and meaning of table manners* (New York, NY: Penguin Books).
- Visser M (2015) *The Rituals of Dinner: The Origins, Evolution, Eccentricities, and Meaning of Table Manners* (Open Road Media, New York).
- Vohs KD, Wang Y, Gino F, Norton MI (2013) Rituals Enhance Consumption. *Psychol. Sci.* 24(9):1714-1721.
- Wallendorf M, Arnould EJ (1991) "We gather together": Consumption rituals of Thanks giving Day. *J. Consum. Res.* 18(1):13-31.
- Wansink B, van Kleef E (2013) Dinner rituals that correlate with child and adult BMI. *Obesity* 22(5):E91–E95.
- Watson-Jones RE, Legare CH (2016) The Social Functions of Group Rituals. *Curr. Dir. Psychol. Sci.* 25(1):42-46.
- Whitehouse H, Lanman JA (2014) The Ties That Bind Us. *Curr. Anthropol* 55(6):674-695.
- Winter SG, Szulanski G (2001) Replication as strategy. *Organ. Sci.* 12(6):730-743.
- Xu Y, Jeong E (2019) The effect of message framings and green practices on customers' attitudes and behavior intentions toward green restaurants. *Int. J. Cont. Hosp. Manage.* <https://doi.org/10.1108/IJCHM-05-2018-0386>
- Zbaracki MJ, Bergen M (2015) Managing Market Attention. *In Cognition and Strategy*:371-405.
- Zbaracki MJ, Bergen M (2010) When Truces Collapse: A Longitudinal Study of Price-Adjustment Routines. *Organ. Sci.* 21(5):955-972.

Img. 1: The welcome entrée



Table 1: Interview participants

WAITER STAFF				
Name	Gender	Age	Seniority	Role
Giuseppe M.	Male	60	8 yr	Maitre
Christian	Male	41	10 yr	Vice Maitre
Elisa	Female	35	8 yr	Waiter
Tatiana	Female	38	17 yr	Waiter
Muriel	Female	42	4 yr	Waiter
Silvia	Female	25	2 yr	Waiter
Mirella	Female	56	6 yr	Waiter
Francesca	Female	57	6 yr	Waiter
Rachid	Male	57	19 yr	Waiter
COOKING STAFF				
Name	Gender	Age	Seniority	Role
Giuseppe P.	Male	55	28 yr	Chef
Alessandro	Male	41	19 yr	Line cook (appetizers)
Giovanni	Male	38	18 yr	Line cook (first course)
Mauro	Male	39	22 yr	Line cook (second course)
Antonio	Male	27	3 yr	Pastry chef
Francesco	Male	25	1 yr	Intern
Tarik	Male	44	11 yr	Dishwasher

Table 2: Coding structure with themes and codes

Main code	N. of participants (N=16)	% of participants	Waiter staff (N=9)	% waiters	Cooking staff (N=7)	% cooking
ASTONISHMENT	3	19%	2	22%	1	14%
COMFORT	3	19%	2	22%	1	14%
EXPERIENCE	3	19%	1	11%	2	28%
FAMILIARITY	4	25%	3	33%	1	14%
LOGISTICS	2	12%	0	0%	2	28%
SATISFACTION	2	12%	2	22%	0	0%
SAVOR	2	12%	0	0%	2	28%

Table 3: The individual understandings about why the welcome entrée routine is being performed

Category	Quotations
ASTONISHMENT	<p><i>'The welcome entrée is something more that you can offer to the guests in order to add something new and original to their consumption experience. It is something more that the restaurant offers to distinguish itself from the competitors and it is something more that in the clients' view can make the difference in a positive way. It is a value adding experience that the restaurant offers to the guests'</i> (Silvia, waiter)</p> <p><i>'It can enhance the curiosity of the guests about the other courses. In addition, from the restaurant perspective, it is a good tool to influence in a positive way the first impression of the client'</i> (Mirella, waiter)</p> <p><i>'It can make the client surprised and, consequently, it can increase the personal expectations about the whole meal'</i> (Giuseppe P., chef)</p>
COMFORT	<p><i>'The welcome entrée let the guests feel at ease, as they are at their home. I think that it contributes to instill the spirit of "welcome home" that a restaurant should provide to the guests. It represents a good starting point to build up a pleasant relationship with the guests'</i> (Giuseppe M., maitre)</p> <p><i>'Restaurant guests expect a warm and sincere welcome. They want to feel welcomed, to be called by name whenever it is possible, to be hosted like to feel at ease in their own place. So the guests' welcome at the restaurant should be customized. The welcome entrée responds to the logic of offering a customized warm and sincere welcome to the guests'</i> (Tatiana, waiter)</p> <p><i>'Offering a warm welcome to the guests through the welcome entrée is the best way to implicitly say to them "welcome home!"'</i> (Antonio, pastry chef)</p>
EXPERIENCE	<p><i>'Offering a welcome entrée aims at preparing the guests to a better approach of the whole meal. Since in general the welcome entrée is appreciated by our guest, this activity contributes in increasing the positive expectations that the guests have in regards of the following courses and the guests will immediately expect to eat tasty food at our restaurant'</i> (Mauro, line cook)</p> <p><i>'The welcome entrée is an important part of the culinary experience that the guest is going to achieve. Through serving the entrée the guest begins to visually imagine and mentally taste his/her food consumption experience'</i> (Francesco, intern)</p> <p><i>'The welcome entrée can influence in a positive way the guest's evaluation of tastiness of the whole meal'</i> (Giuseppe M., maitre)</p>
FAMILIARITY	<p><i>'For me serving clients is like hosting the clients in our big family. For a couple of hours I feel like I am a friend of my guests and the initial service of the welcome entrée helps me in creating this atmosphere with my guests'</i> (Christian, vice maitre)</p> <p><i>'The welcome entrée represents a way to instill a sense of familiarity as I need to take care to my guests. I feel like be a mum with my children'</i> (Francesca, waiter)</p> <p><i>'Generally the restaurant guest is very sensitive to the degree of attention paid by the waiters to his/her table. The welcome entrée is important to communicate to the client that "I care about you" and to instill an immediate perception of waiters' kindness'</i> (Rachid, waiter)</p> <p><i>'The offering of an entrée allows to create a nice atmosphere of closeness not only between guests and the waiters but also with the kitchen staff as it emphasizes the fact that the chef has prepared the entrée as a sign of welcome you [nd the clients]at our restaurant'</i> (Alessandro, line cook)</p>
LOGISTICS	<p><i>'The offering of a welcome entrée is useful for logistics reason because it psychologically decreases the waiting time of the guests. By serving an entrée – that consists in a simple food preparation always ready to be served- we have more time to prepare the main courses that will be ordered by the clients. So, I have the perception that we can prepare the main courses in a more relaxed way without the anxiety that everybody outside is waiting for our food preparations. I feel more relaxed even if in an extremely stressful environment and I am more focused on what I need to prepare and on coordinating the staff without having too many external pressures and worries'</i> (Giuseppe P., chef)</p> <p><i>'It allows to have a greater time management ability within the kitchen staff regarding the different food preparations'</i> (Mauro, line cook)</p>

<p>SATISFACTION</p>	<p><i>'The needs of today's customers must be met immediately because in our society people are used to find the answer to what they are looking for with a click on the web. Restaurant clients are similar in terms of their impatience, so you need to offer a precise and timely service to be able to satisfy them and to increase their loyalty. The welcome entrée service represents a little piece that can contribute to the guests' overall satisfaction' (Elisa, waiter)</i></p> <p><i>'I noticed that many clients are sensitive to the food presentation because, firstly, the clients "eat" with the eyes instead of with the mouth. Since we offer the welcome entrée in an elegant way by serving two different little items in suitable dishes, I think that it can contribute to instill directly the perception of well-created food preparation and, in turn, it can increase the client's satisfaction experienced at our restaurant' (Muriel, waiter)</i></p>
<p>SAVOR</p>	<p><i>'The welcome entrée aims at preparing the customer's palate for savoring the following course. Through the welcome entrée, the guest starts to prepare himself/herself to the savoring of the following course in terms of its mental imagination as well as in terms of the guest's dool toward the following course that his/she has ordered' (Giuseppe P., chef)</i></p> <p><i>'The welcome entrée enhances the guest's desire to savor the following course. It is a way of opening the guest's stomach and preparing his/her taste papilla' (Giovanni, line cook)</i></p>

Figure 1: Within-group consensus of waiter staff

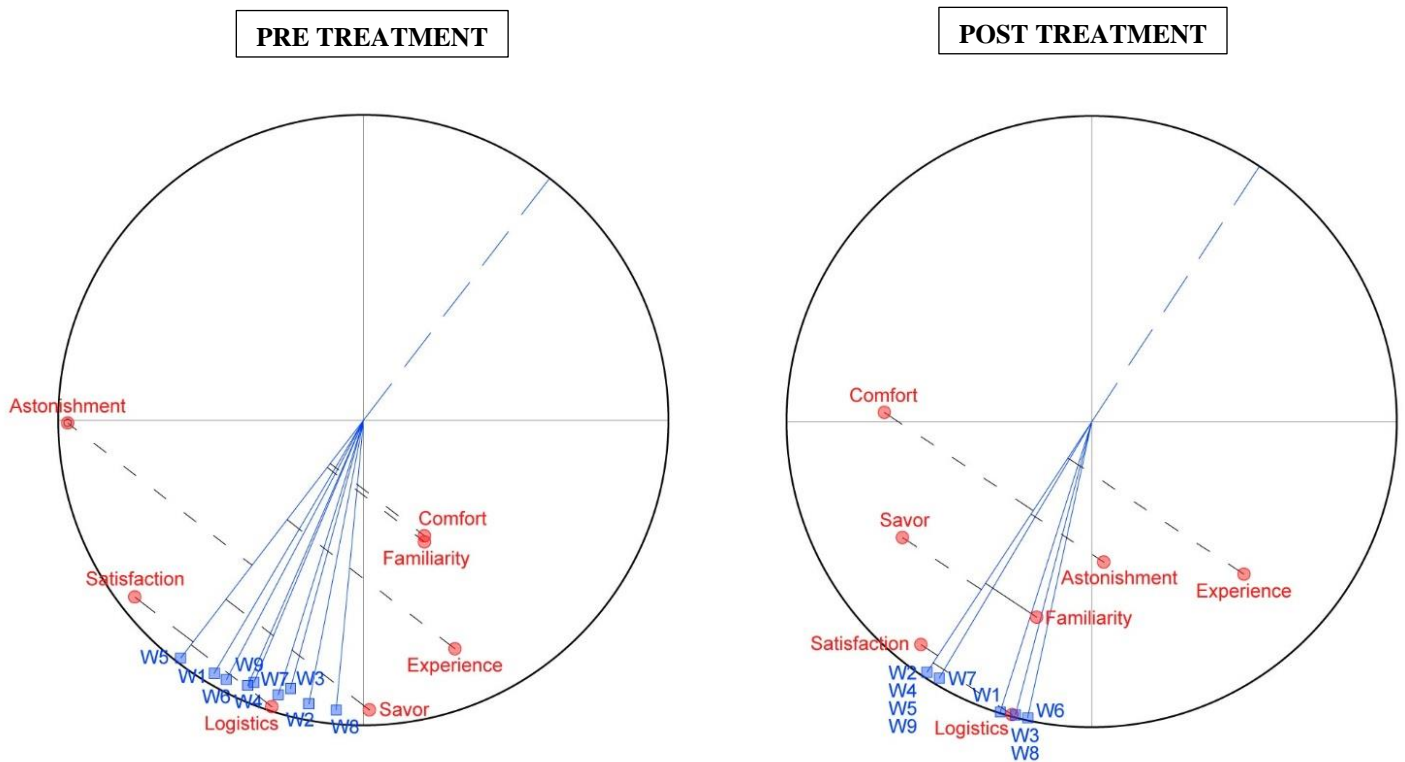


Figure 2: Within-group consensus of cooking staff

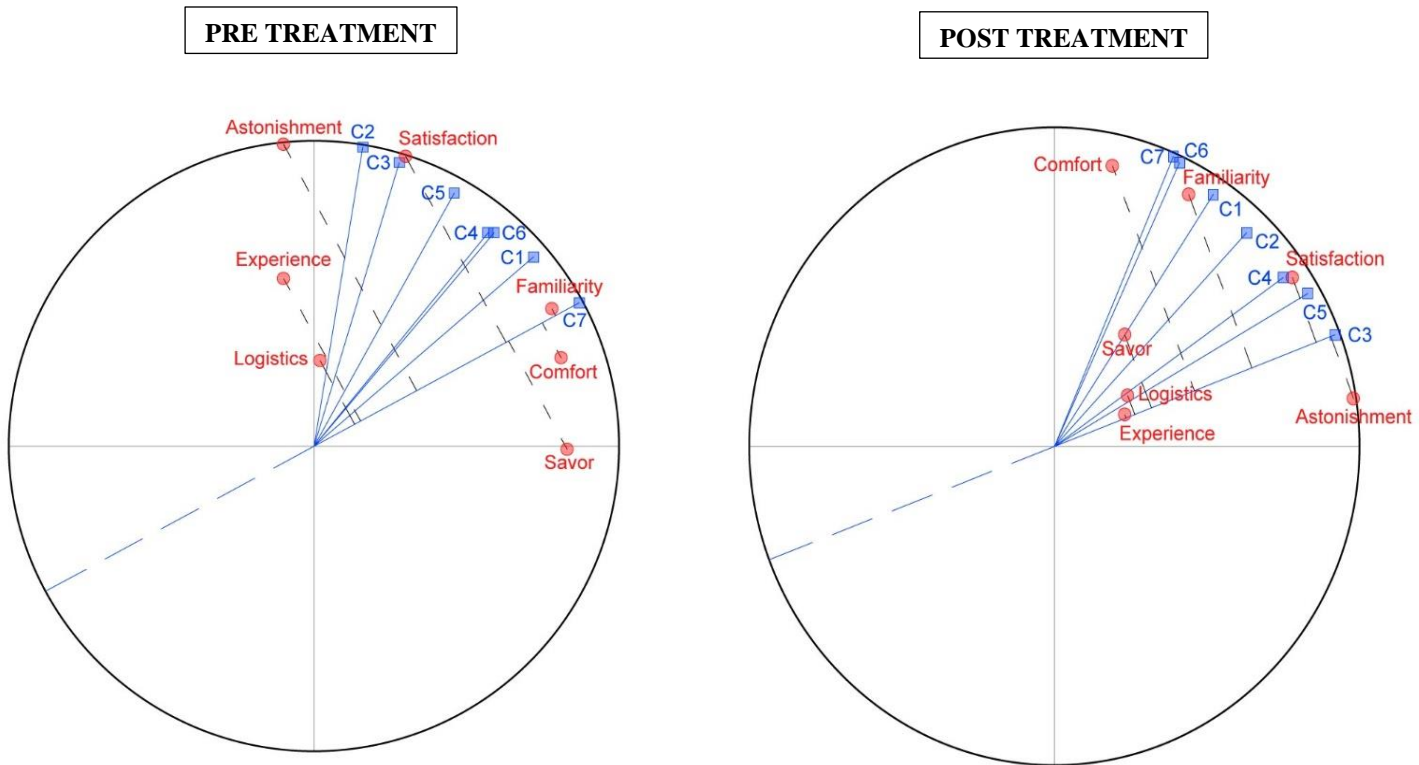


Figure 3: Between-group consensus between cooking staff and waiter staff

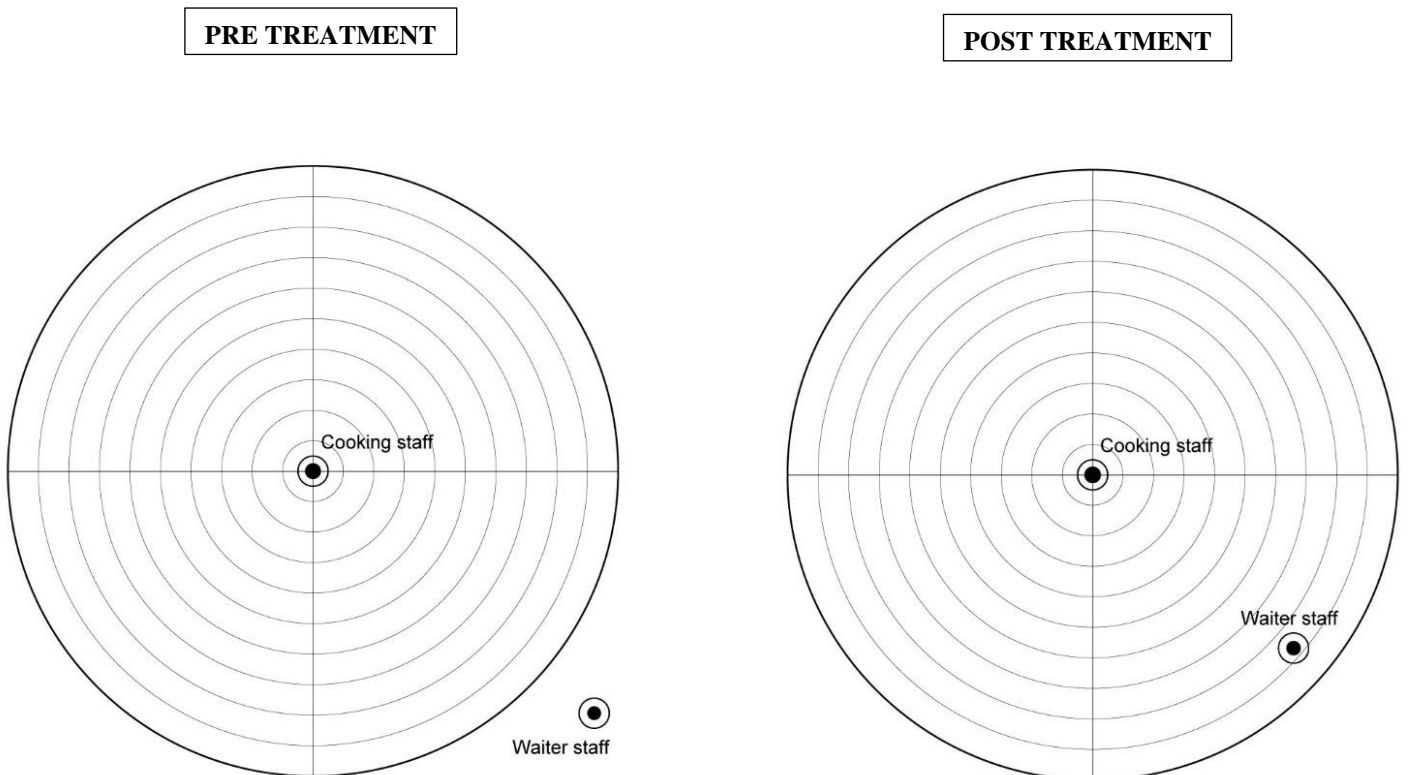


Table 4: Descriptive Statistics

Time (min)	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
before ritual	488	17,0455	2,58872	,11719	16,8153	17,2758	11,22	24,35
after ritual	500	17,4977	1,94906	,08716	17,3265	17,6690	12,72	25,74
Total	988	17,2744	2,29747	,07309	17,1309	17,4178	11,22	25,74

Table 5: Descriptive Statistics and F-statistics

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	F	Sign.
						Lower Bound	Upper Bound				
N_Guests_table	before ritual	488	3,58	1,424	,064	3,45	3,70	1	8	2,353	,125
	after ritual	500	3,44	1,318	,059	3,33	3,56	1	8		
Giuseppe M.	before ritual	488	0,05	,208	,009	,03	,06	0	1	,524	,469
	after ritual	500	0,04	,186	,008	,02	,05	0	1		
Christian	before ritual	488	0,12	,324	,015	,09	,15	0	1	,714	,398
	after ritual	500	0,10	,303	,014	,08	,13	0	1		
Elisa	before ritual	488	0,13	,336	,015	,10	,16	0	1	,003	,959
	after ritual	500	0,13	,334	,015	,10	,16	0	1		
Tatiana	before ritual	488	0,17	,372	,017	,13	,20	0	1	,911	,340
	after ritual	500	0,14	,351	,016	,11	,17	0	1		
Muriel	before ritual	488	0,14	,342	,015	,10	,17	0	1	,022	,881
	after ritual	500	0,13	,339	,015	,10	,16	0	1		
Silvia	before ritual	488	0,17	,380	,017	,14	,21	0	1	,000	,994
	after ritual	500	0,17	,379	,017	,14	,21	0	1		
Mirella	before ritual	488	0,12	,324	,015	,09	,15	0	1	,003	,956

	after ritual	500	0,12	,325	,015	,09	,15	0	1		
Francesca	before ritual	488	0,12	,331	,015	,10	,15	0	1	,108	,743
	after ritual	500	0,13	,339	,015	,10	,16	0	1		
Rachid	before ritual	488	0,15	,357	,016	,12	,18	0	1	,037	,847
	after ritual	500	0,15	,361	,016	,12	,19	0	1		

Table 6: Descriptive Statistics and F-statistics

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	F	Sign.
						Lower Bound	Upper Bound				
Waste_gr_entree	before ritual	60	4,070	1,3304	,1717	3,727	4,414	1,72	6,85	7,237	,008**
	after ritual	60	3,497	,9789	,1263	3,244	3,749	1,06	5,66		
Waste_gr_meal	before ritual	60	16,164	2,5246	,3259	15,512	16,816	11,48	21,34	4,887	,029*
	after ritual	60	15,170	2,4020	,3101	14,549	15,790	10,24	20,48		
Expense_meal	before ritual	60	40,070	3,1767	,4101	39,249	40,891	34,65	47,80	,606	,438
	after ritual	60	39,608	3,3318	,4301	38,747	40,468	33,90	47,50		
Expense_bev	before ritual	60	7,576	1,3965	,1803	7,215	7,937	4,80	10,59	,092	,762
	after ritual	60	7,655	1,4646	,1891	7,277	8,034	5,10	11,00		
Male	before ritual	60	44,19	10,357	1,337	41,51	46,86	24	68	,181	,671
	after ritual	60	43,39	10,186	1,315	40,76	46,02	24	71		
Female	before ritual	60	42,68	10,106	1,305	40,07	45,29	26	70	,194	,661
	after ritual	60	43,45	9,093	1,174	41,10	45,80	22	66		
Children	before ritual	60	7,89	3,486	,450	6,99	8,79	2	16	,709	,401
	after ritual	60	8,42	3,298	,426	7,56	9,27	2	19		

Table 7: Regression Coefficients (Dependent variable: Waste_gr_entree)

	Coefficient	Standard Error	Standardized Coefficient	p Value	VIF
Intercept	4,657	1,466		,002	
Treatment	-,563	,215	-,236	,010**	1,012
Expense_meal	,012	,036	,034	,731	1,207
Expense_bev	-,154	,082	-,183	,064	1,201
Male	-,003	,011	-,030	,741	1,013
Female	,005	,011	,044	,628	1,021

Table 8: Regression Coefficients (Dependent variable: Waste_gr_meal)

	Coefficient	Standard Error	Standardized Coefficient	p Value	VIF
Intercept	19,364	3,112		,000	
Treatment	-,998	,456	-,200	,031*	1,012
Expense_meal	-,012	,077	-,016	,874	1,207
Expense_bev	-,154	,175	-,088	,380	1,201
Male	-,024	,022	-,097	,293	1,013
Female	-,012	,024	,045	,628	1,021

APPENDIX

Table A1. Data matrix of the VMU biplot reported in Figure 1 and in Figure 2 (higher numbers indicate lower prioritization).

	pre-treatment							post-treatment							pre-treatment									post-treatment								
	C1	C2	C3	C4	C5	C6	C7	C1	C2	C3	C4	C5	C6	C7	W1	W2	W3	W4	W5	W6	W7	W8	W9	W1	W2	W3	W4	W5	W6	W7	W8	W9
Experience	2	5	3	2	2	2	2	2	1	3	1	1	1	2	3	4	5	4	3	4	4	5	3	2	1	3	1	1	2	1	3	1
Comfort	6	3	4	3	4	6	6	6	6	4	3	4	6	6	2	2	3	1	1	2	3	2	1	1	2	1	3	2	1	2	1	3
Familiarity	5	4	5	4	5	7	7	5	4	5	7	5	7	7	1	3	1	2	2	1	1	3	4	5	4	5	5	4	4	4	5	5
Satisfaction	7	7	6	7	7	5	4	7	7	6	5	7	5	5	5	5	6	5	7	6	5	4	6	6	7	6	6	7	6	6	6	6
Astonishment	3	6	7	5	6	4	3	4	5	7	6	6	4	4	4	1	2	3	4	3	2	1	2	3	3	2	2	3	5	3	2	2
Savour	4	1	1	6	3	1	5	3	3	1	4	3	2	3	6	6	7	6	5	5	6	6	5	4	5	4	4	5	3	5	4	4
Logistics	1	2	2	1	1	3	1	1	2	2	2	2	3	1	7	7	4	7	6	7	7	7	7	7	6	7	7	6	7	7	7	7

Table A2. Correlations between cooking staff and waiter staff used for the MDS solution in Figure 3.

		PRE TREATMENT	
1. Cooking staff		1.	2.
2. Waiter staff		1.00	
		-0.41	1.00
		POST TREATMENT	
1. Cooking staff		1.00	
2. Waiter staff		0.13	1.00

The concept of sustainability in hotel industry: current dominant orientations and future issues

Claudia Cozzio

Department of Economics and Management, University of Padova

Address: Via del Santo 33, 35123 Padova, Italy

Email: claudia.cozzio@phd.unipd.it

ABSTRACT

This paper aims at reviewing the main literature on sustainability in the hotel industry through the analysis of 142 papers published in eight leading hospitality journals from the year 2000 to the year 2017. This paper proposes an in-depth focus on three dimensions of sustainability (i.e. economic, environmental, social), applying the Hotel Sustainable Business Model (Mihalic et al., 2012) as a framework of analysis. Moreover, distribution across time period, research methodologies employed and study locations are investigated. The findings that emerge from the literature review identify dominant research orientations related to sustainability in the hotel context, enabling the recognition of research gaps in the literature. Concerning the future, the main challenge is the adoption of a more integrated approach that takes full account of the economic, environmental and social dimensions of the sustainable development. In addition, starting from the application of the Hotel Sustainable Business Model (Mihalic et al., 2012), this study proposes an evolution of the framework of analysis in order to integrate in the model the latest sustainable challenges that the industry is facing.

Keywords

hotels; sustainability; sustainable development; economic sustainability; environmental sustainability; social sustainability; literature review.

INTRODUCTION

UNWTO (2005) defines sustainable tourism as “tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities”. In that perspective, further definitions support this approach: they define sustainable development (SD) as embedding aspects on environmental, economic and social sustainability (Barlow, 2004), arguing that sustainability is one of the key factors regarding future competitiveness and business survival (e.g. Schoorman et al., 2016).

Due to the fact that a growing number of hotels have publicly emphasized and demonstrated their commitment to sustainability as a strategy in order to differentiate themselves from rivals by increasing their competitive advantages in the marketplace (Kim and Han, 2010) and in order to fulfill guests' growing eco-friendly needs (Han et al., 2011), sustainable issues have come to the forefront in the hospitality sector.

In fact the supply-side of the tourism industry is making effort to adopt sustainable practices (Griffin and Delacey, 2003; Zimmer et al., 1994;) and, progressively, going green is believed to be an effective competitive frame in the field (Han et al., 2009; Manaktola and Jauhari, 2007; Wolfe and Shanklin, 2001). Examples of sustainable programs developed by hotels are mainly related to energy efficiency, water conservation, waste management, green building design and construction, environmental education (employees and customers) and green supply chain (Dimara et al., 2017; Chan, 2009; Mensah, 2006; Bohdanowicz et al., 2005).

Basing on the fact that *hôtellerie* is the most representative class among the scientific contributions related to green practices in hospitality industry (Kim et al., 2017), this paper seeks to investigate in an in-depth way the state-of-the-art of the literature in order to understand the dominant orientations toward sustainability in the hotel industry and to identify research gaps and underexplored areas of investigation.

Within that scenario, this study reviews the current tourism sustainable literature and it provides an original articles' categorization applying the Hotel Sustainable Business Model framework (Mihalic et al., 2012) that represents an evolution of the Three Pillars Model proposed by UNWTO (2005). The value of the paper lies in the fact that the Hotel Sustainable Business Model framework has never been applied in a literature review, despite it is specifically created for addressing sustainability in the hotel industry (Mihalic et al., 2012). In particular two are the major challenges that the paper aims at addressing. First, the application of a specific model (Hotel Sustainable Business Model) provides a valuable categorization for understanding the state-of-the-art of the sustainable literature in the hotel context and it allows to identify research gaps in the literature. Second, basing on the findings from the literature review, the study aims at proposing an update version of the model by integrating the latest challenges and perspectives that the hotel industry is facing in order to better highlight the most promising future streams of

discussion in the field.

STATE-OF-THE-ART OF THE LITERATURE

The scope of the literature review process was narrowed in two phases.

Firstly, a comprehensive search for sustainability in the hospitality literature was conducted through Scopus, a database commonly used by academic researchers (Myung et al., 2012). Following Kim et al. (2017) and the guidelines about sustainability's synonymous proposed by different authors (Han et al., 2009; Pizam, 2009; Laroche et al., 2001), the keywords (1) Hotel AND (2) sustainability OR (3)

sustainable OR (4) environment-friendly OR (5) environmentally-friendly OR (6) eco-friendly OR (7) green were chosen and their presence in the sections Title, Abstract or Keywords was analyzed. Generally the term *sustainable* is alternatively called “environmentally friendly”, “eco friendly”, or “green” (e.g. Pizam, 2009; Manaktola and Jauhari, 2007; Laroche et al., 2001).

The review was narrowed for a recent time period, considering articles published from year 2000 to year 2017, due to the fact that the subject is a relatively new line of research (Chamorro et al., 2009). Successively, following Kim et al. (2017), the review was focused on the eight leading journals in hospitality context such as Annals of Tourism Research, Cornell Hospitality Quarterly, International Journal of Contemporary Hospitality Management, International Journal of Hospitality Management, Journal of Hospitality & Tourism Research, Journal of Sustainable Tourism, Journal of Travel Research and Tourism Management.

This preliminary exploration resulted in 162 scientific documents and the articles were verified by analyzing carefully the full text to confirm that the topics were related to the focus of the analysis. Content analysis was used to systematically examine the research contents (Weber, 1990; Stemler, 2001). Finally, a total of 142 studies were identified as final sample (Appendix A).

Basing on the application of the Hotel Sustainable Business Model framework (Mihalic et al., 2012), research focus on the three dimensions of sustainability and indicators related to sustainability's dimensions are reviewed. Moreover, the documents are analyzed by number of articles by period, distribution of publications by research type and distribution across study locations.

Research focus on the three dimensions of sustainability and their indicators

In order to investigate the research focus of the articles reviewed, the Hotel Sustainable Business Model (Fig. 1) developed by Mihalic et. al. (2012) is chosen as a framework of analysis. In particular, the elements of the World Tourism Organization Sustainability model (2005) are combined with Triple Business Line Sustainability model developed by Elkington (1998).

Fig. 1: The Hotel Sustainable Business Model framework. Source adapted from Mihalic et al., (2012).

Hotel Sustainable Business Model (HSBM)		
Economic dimension	Environmental dimension	Social dimension
<ul style="list-style-type: none"> • Financial (cost-effectiveness) • Marketing (customer satisfaction) 	<ul style="list-style-type: none"> • Resources conservation • Preservation of biological diversity • Environmental Education 	<ul style="list-style-type: none"> • Human Capital • Cultural Capital • Power to change participation

The UNWTO Sustainability model (2005) is based on three pillars. The first pillar is related to economic sustainability and it is focused on the cost-effectiveness of all economic activities, emphasizing the financial components.

The second pillar is associated to environmental sustainability and it refers to conserving and managing resources in such a way that the environmental damage is minimized and biological diversity and natural heritage are preserved.

The third pillar is the social sustainability one and it includes the respect of human rights, the empowerment of the local culture and the avoidance of any forms of cultural destruction.

Besides, the Triple Business Line Sustainability model (TBL) is a planning and reporting system framework that focuses mainly on measuring and controlling companies' economic, environmental and social performance.

In the tourism scenario, the industry seems to have little awareness of the existence of TBL and of its relevance to the achievement of sustainable development (O'Dwyer and Owen, 2005). Comparing to the UNWTO model, the main difference lies in a broader definition of the social dimension that explicitly includes also the role of the employees and the relation with government and educational institutions in order to achieve sustainability.

In order to implement sustainability in tourism industry in an effective way, Mihalic et al. (2012) stated that additional requirements have to be met to make sustainability's achievement possible and successful. Therefore, the Hotel Sustainable Business Model specifically adapts the concept of sustainability to the hotel industry by introducing three main innovations comparing to the previously mentioned two existing models.

Firstly, consumers' satisfaction is defined as a part of the economic dimension. Cost efficiency remains a necessary condition for the creation of profit, however intangible factors such as customer satisfaction, long-term relationships and customer-perceived service quality add most of the value to a service. In fact, the marketing dimension is moved to the economic business category because a firm's profitability and customer satisfaction can be seen as complementing

competitiveness measurements. Secondly, the environmental dimension is extended to include environmental education by pointing out the responsibility of tourism suppliers to educate both visitors and employees. This new dimension is relevant because it emphasizes the responsibility of a firm to take action in this regard and the responsibility of hoteliers to educate visitors that in turn can promote sustainable hotel demand.

Thirdly, the social business category includes three subgroups: human capital related to employees' behavior toward sustainable practices, cultural capital that is linked to the valorization of the local culture as important asset of any tourism destinations and a subcategory called power to change participation that includes relationships with local organizations and communities that help to build partnerships for sustainable development. This last category is based on the involvement of all relevant stakeholders in the creation of sustainability.

The results are shown in Table I. The majority of the articles (65 articles, 46%) deals with the economic dimension mainly in terms of investigating customers' favourable attitudes (e.g. Tang et al., 2017; Line et al., 2016; Hanks et al., 2016) and positive behavioural intentions (e.g. Ponnappureddy et al., 2017; Han et al., 2011; Lee et al., 2010) toward hotels that implement sustainable practices. In particular, the attention in latest articles is focused on analyzing the effective involvement and satisfaction of consumers who participate in sustainable programs as for example hotel towel reuse program (i.e. Dimara et al., 2017; Cvelbar et al., 2017).

Within the economic dimension, the minority of the papers (12 articles, 8%) deals with financial related actions aimed primary at saving costs while contributing to environmental protection. Saving costs mainly includes the installation of energy efficient appliances (i.e. Kahn et al., 2015; Woodworth et al., 2014; Chan et al., 2013) and the adoption for waste reduction programs (i.e. Singh et al., 2014; Rahman et al., 2012).

The social dimension holds the second place (44 articles, 31%) focusing mainly on the involvement of all the relevant stakeholders in the creation of sustainability. In particular, 30 articles account for the power to change participation subcategory emphasizing stakeholders' involvement in the implementation of sustainability, while 14 articles are classified in the subcategory human capital analyzing sustainability under a human resources perspective.

The environmental dimension comprises 23 papers (16%) and it represents a minor class. The most representative subcategory is resources conservation focusing exclusively on the implementation and the effect of specific sustainable practices such as water and energy saving programs (e.g. Chang

et al., 2015; Gossling et al., 2015) and waste reduction initiatives (Radwan et al., 2012; Chan et al., 2001) adopted by hotels in order to decrease harmful effects to the environment.

In comparison to the subcategory financial, these findings suggest that a considerable number of papers frames sustainable practices exclusively as creating environmental protection benefits.

Within the environmental dimension, the environmental education subcategory represents a

minor class (3 articles), followed by one contribution that investigates the topic of biodiversity preservation (Milder et al., 2016).

An important attempt in applying a comprehensive approach that addresses all relevant economic, environmental and social dimensions of the sustainable development is done by 5 papers published after 2011. Finally, further cross categories analysis are showed by 5 papers.

Table I: Dimensions of sustainability analyzed in the paper.

Dimensions of sustainability	N. of articles	%
<i>Economic</i>		
Financial	12	8%
Marketing	53	37%
<i>Total Economic</i>	65	46%
<i>Environmental</i>		
Resources Conservation	19	13%
Preservation of biodiversity	1	1%
Environmental education	3	2%
<i>Total environmental</i>	23	16%
<i>Social</i>		
Human Capital	14	10%
Cultural Capital	0	0%
Power to change participation	30	21%
<i>Total Social</i>	44	31%
<i>Cross-dimensions</i>		
Economic and Environmental	3	2%
Economic and Social	1	2%
Environmental and Social	1	1%
All	5	4%
<i>Total cross-dimensions</i>	10	7%
Total	142	100%

Successively, in order to understand in an in-depth way the dimensions of sustainability, the list of indicators proposed by Mihalic et al. (2012) as measurements for sustainability dimensions is applied in the classification of the articles reviewed (Table II).

Within the financial subcategory, the majority of papers (6 articles) adopts a broad perspective considering the global hotel financial performances in terms of both the income statement and balance sheet dimension (e.g. Singh et al., 2014), while 4 articles focus on the operating costs minimization (e.g. Woodworth et al., 2015). In that context, one paper takes into consideration the total revenues as indicators for sustainability focusing on a hedonic price setting (Sánchez-Ollero J et al., 2014) and one paper analyses the debt equity structure for a sustainable growth (Madan et al., 2007).

Concerning the marketing subcategory, the most popular indicator adopted to address

sustainability is the share of highly satisfied guests (15 articles) toward the implementation of sustainable practices in hotels (e.g. Yu et al., 2017), followed by the investigation of the intentions to visit the hotel (Hanks et al., 2016) that accounts for 12 papers and by the guests' intentions to actively participate in sustainable programs such as towels reuse programs (Dimara et al., 2017) that covers the third position including 7 articles.

As far as the sub-dimension resources conservation, energy consumption (7 articles) and water conservation measures (4 articles) appear as the most applied indicators, pointing out a high sensibility in the industry in terms of minimizing these harmful environmental effects.

Under that light, the subcategory education appears a minor class (3 articles) especially from the point of view of the employees' education (1 article).

Within the context of the social dimension, the subcategory human capital is mainly measured by the organizational culture oriented on sustainability (11 articles), while the subcategory power to participation presents multiple indicators such as the monitoring of the implementation of hotel's sustainable/ecologic development strategy (10 articles), the participation in the overall strategy of sustainable development of tourism in the destination (7 articles), environmental quality standards (5 papers) and cooperation with the local residents (4 articles) and with the municipality (3 articles) in order to achieve sustainability.

In particular, the indicator related to the monitoring of the implementation of hotel's sustainable/ecologic development strategy is mainly associated to articles that employ the content analysis of the websites (e.g. Pérez et al., 2014), while the measure of the participation in the overall strategy strongly refers to stakeholder concrete actions toward sustainable development (e.g. Nunkoo et al., 2017).

Table II: The Hotel Sustainable Business Model indicators

Dimensions of sustainability	Subcategory of sustainability	Performance indicators	N. of articles
<i>Economic</i>	<i>Financial</i>	Global financial performances	6
		Operating costs	4
		Total Revenues	1
		Debt/Equity structure for sustainable growth	1
	<i>Marketing</i>	Share of highly satisfied guests	15
		Share of guests who would have the intention to visit the hotel (IV)	12
		Intention to participate in sustainability program	7
		Customers' purchase attitudes	6
		Share of guests who would pay a premium price for the hotel (WTP)	4
		WTP+IV+WOM	4

		WTP+IV	3	
		IV+WOM	1	
Total			64¹	
<i>Environmental</i>	<i>Resources conservation</i>	Energy consumption	7	
		Water consumption	4	
		All-embracing indicators (water, pollution, energy, waste)	4	
		Solid waste consumption	2	
		Direct CO2 emission	2	
	<i>Preservation of biodiversity</i>	Selecting plants that are adapted to a particular environment	1	
	<i>Environmental education</i>	Environmental activities for guests (e.g. workshops, information brochures)	2	
		Environmental activities for the employees	1	
	Total			23
	<i>Social</i>	<i>Human Capital</i>	Organizational culture oriented on sustainability	11
Employee satisfaction			2	
Training of employees			1	
<i>Power to change participation</i>		Monitoring of the implementation of hotel's sustainable/ecologic development strategy (e.g. the realization of the objectives)	10	
		Participation in the overall strategy of sustainable development of tourism in the destination	8	
		Environmental quality standards (e.g. ISO 14001 Certificate, LEED Building)	5	
		Cooperation with local residents	4	
		Cooperation with the municipality	3	
Total			44	

Finally, in order to evaluate in an in-depth way the areas of environmental endeavor in hotel industry, this literature review presents a brief assessment of the sustainable best practices adopted by hotels, following the list proposed by Hsieh et al. (2012).

Among 46 articles (32%) that explicitly address a specific practice mentioned in the framework list developed by Hsieh et al. (2012), energy efficiency is the primary (11 articles), followed by waste management (10), water conservation (5), reduction of carbon footprint (4), environmental education (3), biodiversity/eco-system (3), eco-supply chain and green purchasing (2), ecological food (1) and green building (1).

¹ One contribution is missing because of its conceptual nature.

In that context, the role of ecological food appears underexplored in the industry. In fact, the organic food can play a vital role in delivering green services to customers (Jang et al., 2011) and for that reason it could represent a promising research area in hotel scenario.

Distribution across time period

The distribution of publications per year is shown in Table III. Overall, the number of articles reveal an increasing pattern starting from 2011. In fact, the number of publications grows significantly in 2012, jumping from 8 articles in 2011 to 14 articles in 2012 and maintaining constant over the next years this average of scientific contributions. This trend demonstrates that sustainability has become a major research topic in recent time (Chamorro et al., 2009) and the number of studies continues to increase in the hotel industry.

Moreover, Table I provides information about distribution in terms of the article's perspective. Following the definition given by Myung et al. (2012), papers are classified on whether they are management-focused or consumer-focused. The first group is related to sustainable management issues and strategies in the perspective of hoteliers, while the second group is centered on consumer behaviors (e.g. revisit intentions) and perceptions (e.g. attitudes) toward hotels that implement sustainable practices.

The results show that the majority of the reviewed articles falls into the management-focused group (64%), pointing out the practitioners' perceptions and commitments toward sustainability (e.g. Mittal et al., 2016), while a percentage of 36% is associated to a consumers' view focusing on sustainability's impact on different consumer dimensions such as purchase attitudes (e.g. Chen et al., 2012), behavioural intentions as willingness to pay, word of mouth, visit intentions (e.g. Chen et al., 2014) and customers' satisfaction (e.g. Berezan et al., 2013).

This literature review also reveals how the interest of hospitality scholars who study sustainability in hotel industry has evolved. Until 2011 many researchers investigated mainly hotel practitioners' barriers and motivational factors associated with the implementation of sustainability. In contrast, the number of customer-focused articles increased sharply in 2011, implying that research on sustainability may be transitioning to a new phase with an emphasis on the consumer perspective. Therefore, in recent time the focus has evolved toward a consumer perspective (Kim et al., 2017).

Table III: Distribution of publications per year.

Year	Management-focused	Consumer-focused	Total
2017	7	6	13
2016	7	7	14
2015	13	11	24
2014	16	10	26
2013	8	5	13
2012	10	4	14
2011	6	2	8
2010	2	5	7
2009	1	1	2
2008	2		2
2007	5		5
2006	5		5
2005	1		1
2004	1		1
2003	1		1
2002	3		3
2001	3		3
Total	91	51	142

Distribution across research methodologies employed

Table IV presents the distribution of articles by research type (qualitative versus quantitative). Overall, a robustly majority of articles employs quantitative methods (97 articles, 68% of total articles), whereas qualitative studies represent a portion of 31% of the total contributions (44 articles). Moreover, one article develops a combination of quantitative and qualitative methods (Perez-Pineda et al., 2017).

As far as the research methodologies according the article's perspective, a percentage of 56% of the management-focused studies employs quantitative methods and nearly the totality (90%) of consumer-focused contributions applies quantitative methods.

Survey-based quantitative methods are predominant, accounting for the 56% of the studies (80 articles). Moreover, concerning the management focus articles, data tend to be based on samples related to managers who implement sustainable practices, pointing out a lack in employees' perspectives about sustainability.

Concerning the qualitative methods, case-studies capture the majority of the papers (21 articles), followed by interviews and site observations (9 articles). Content analysis is used in 9 contributions mainly published after 2014 and this methodology is applied in the corporate website analysis in order to investigate how hotels communicate the implementation of sustainability to the external environment.

As far as the conceptual nature of contributions, literature review is used to investigate sustainability both in a consumer's (Gao et al., 2016) and in a hotel's perspective (Kasim, 2015), theoretical model

approach is developed in two contributions (Chathoth et al., 2016; Melissen et al., 2016) and grounded theory deals with contributions focused on the stakeholder perspective (Nunkoo et al., 2016).

Table IV: Data collection method.

Data collection method	N. of articles	%
<i>Quantitative methods</i>		
Survey	80	56%
Archival Data	10	7%
Experiment	7	5%
<i>Qualitative methods</i>		
Case-study	21	14%
Content analysis	9	6%
Interviews and site observations	9	6%
Theoretical model	2	2%
Literature review	2	2%
Grounded theory	1	1%
<i>Mix methods</i>		
Mixed method approach	1	1%
Total	142	100%

Distribution across geographical locations of the study

Due to the nature of the international outlook of the hotel industry, this literature review examines also the locations of the studies in order to understand the spread of the sustainable issues (Table V). According to Myung et al. (2012), countries are grouped into eight categories to provide a continental comparison and studies conducted in more than two locations are grouped as a cross-countries.

Among 138 contributions developed in specific geographical locations, nearly one third is conducted in the USA (46 articles), followed by Asia (41 articles), Europe (29 articles), Australia (4 articles), Africa (4 articles), South America (4 articles) and Middle East (1 article).

Moreover, 9 articles that cover more than two countries deal with the cross-countries category.

Table V: Distribution across study locations.

Study locations	N. of articles	%
USA	46	33%
Asia	41	30%
Europe	29	21%
Cross countries	9	6%
Africa	4	3%
Australia	4	3%
South America	4	3%
Middle East	1	1%
Total	138	100%

DISCUSSION

This study reviews and analyzes 142 sustainability related research articles, published in eight leading hospitality journals during the period 2000-2017. Through the analysis, current dominant orientations are identified and the directions for future researches are targeted.

Synthesizing findings that exist in the literature, this study offers an original all-embracing conceptualization of sustainability, adopting the Hotel Sustainable Business Model (Mihalic et al., 2012) that has never been applied in a literature review. In that context (Table I), the environmental perspective (16%) is largely lacking compare to the economic (46%) and the social one (31%).

In addition, as shown in Table III, in terms of distribution of articles by period, the research activity on sustainability literature in the hotel industry has increased over the last few years and a sharp increase of publications is revealed starting from 2011. Therefore, the current state of research indicates that sustainability is a relatively young but rapidly growing topic within the hotel industry.

In terms of research perspective, the management-focused articles represent the majority of the contributions (64%). In that context, the review of the literature interestingly reveals how the attention of hospitality scholars who study sustainability has evolved, pointing out that in more recent time, articles' focus has shifted toward a consumers' perspective. Thus, the adoption of the Hotel Sustainable Business Model (Mihalic et al., 2012) emerges as an important value adding tool in the literature review because it represents the first sustainability framework that explicitly includes the consumers' perspective in the economic dimension of sustainability.

In particular, basing on the findings from the literature review, an emerging recent stream of study is represented by the focus on the roles of various message frame in motivating customers to participate in sustainable practices (e.g. Dimara et al., 2017; Cvelbar et al., 2017; Hanks et al., 2016). In fact a key strategy for hoteliers is developing persuasive messages with the goal of enhancing guests' voluntary participation in green programs such as towel reuse (Grazzini et al., 2018; Bapuji et al., 2018) or minimizing food waste initiatives (Antonschmidt and Lund-Durlacher, 2018) as confirmed by recent publications. In order to capture more specifically the aforementioned stream of discussion, a new dimension named "Co-creation" resulting from a combination between the social dimension (human capital as organizational culture oriented toward sustainability) and the economic dimension (marketing as the guests' intention to participate in sustainable programs) is proposed as an integration of the Hotel Sustainable Business Model (Mihalic et al., 2012) for better targeting the future directions of the literature. In fact, along with the customers' willingness to get involved in hotel green initiatives and their satisfaction related to ecofriendly programs, also the effort made by the hotels to instill guests' awareness of sustainable issues has come to the forefront. For that reason, sustainability in hotels recently appears as a process that needs to be implemented jointly by companies as well as by

guests in order to be achieved properly.

Key drivers in conceiving co-creation include the acceleration of consumer knowledge and their expectations and the logic of integrating the consumer needs and expectations across the hotel's value chain (Prahalad and Ramaswamy, 2004). Basically, the value of sustainability in hotels appears as markedly created by the hotel itself and by the customers through active dialogue and personalized strategies that enhance in the latter the desire of being exposed to sustainable programs and of being an important part that actively contribute to sustainability. Along with the importance of consumers' satisfaction toward sustainability that emerges from the relevance of the economic dimension (46%), the significant size of the social dimension (31%) represents a valuable finding, pointing out a relatively new trend of sustainability –the majority of contributions in the category starts from 2014- as a shared vision with all the relevant stakeholders. Within that growing dimension, a relevant number of recent publications try to emphasize the concept of managing tourism resources while ensuring the local community's participation (i.e. Kimberly et al., 2017; Perez-Pineda et al., 2017; Nunkoo et al., 2016), adopting a community-based approach that allows to understand how the community members can actively participate in the tourism development. In order to better capture this stream of discussion, a new subcategory named *community-based approach* is proposed and it constitutes the social dimension, together with the subcategories *human capital*, *social capital*, *power to change participation*. In the aforementioned new design of the Hotel Sustainable Business Model (Mihalic et al., 2012), the subcategory *power to change participation* becomes mainly focused on monitoring the implementation of hotel's sustainable development strategy and on the achievement of environmental quality standards (e.g. ISO 14001 Certificate, 5LEED Building), while the new subcategory *community-based approach* is strongly directed on initiatives that protect the rights of local people over their own resources, cultures and traditions (Nair et al., 2015). However, beside the challenge to ensure that benefits are fairly distributed in the community and to minimize the negative impacts on the natural and socio-cultural environment, from the findings emerged a new future challenge that consists in proposing possible models to facilitate community participation in tourism development. Since heterogeneity of the community members is frequently neglected by a multi-stakeholder collaboration from the macro perspective, contributions that help in explaining the interactions and cooperation between the community members themselves and other stakeholders are fostered.

Reviewing this body of literature has enabled to identify major research domains related to sustainability, creating an organized framework that provides a theoretical foundation for the investigations in the hotels context and it enables the identification of research gaps in the literature.

In that context, the main challenge is the adoption of a more integrated approach that is not only compliant with standards connected to financial benefits, but it aims at improving

competitiveness through environmental and social dimensions. It is difficult to manage all the three dimensions because potentially sustainability results into three conflicts: grow the economy, distribute the growth fairly and in the process do not degrade the eco system (UNWTO, 2005).

A lack in approaching this comprehensive perspective emerges by this literature review: only 5 papers address all the three dimensions of sustainability by applying the Triple Bottom Line Sustainability model (Assaf et al., 2012), the dimension of “greening” hotel operations in the context of corporate social responsibility (Bohdanowicz et al., 2011) and the potential role of economic, environmental and social reporting (Prudhomme et al., 2016; Cvelbar et al., 2013; Mihalic et al., 2012).

Finally, concerning the research methodologies employed (Table IV), only a portion of 4% of the contributions (5 articles) presents a conceptual nature. The lack of theoretical papers indicates the need for more conceptual support to facilitate knowledge building and further empirical studies (Knight, 1999), confirming the usefulness of the present study as an advancement for the theoretical conceptualization of the topic.

Future research implications and study limitations

The findings have several important implications and the need for research attention in some areas is found.

Concerning the economic dimension, the reviewed articles generally suggest that customers have positive attitudes and behavioural intentions towards sustainable practices implemented by hotels. In fact, consumers with a high degree of consciousness on environmental problems tend to prefer to book an environmentally friendly property instead of a non-green property (Han et al., 2010; 2009). In addition, many guests prefer to stay in an environmentally friendly property not only for a matter of intrinsic quality characteristics (e.g., allergen-free features), but also for the personal emotions experienced in an environmentally friendly property (e.g., preserving the long-term maintenance of the environment for the future generations) (Han et al., 2011). In other words, such emotional and intangible benefits might drive consumer sustainable preferences in the hospitality industry.

In addition, according to Ajzen’s (1991) Theory of Planned Behavior that considers attitudes as precursors of behavioural intentions, some reviewed papers investigate attitudes as key drivers of consumers’ behavioral intentions toward green hotels (e.g., Line et al., 2016; Chen et al., 2014; Kim et al., 2014; Teng et al., 2014). In particular, according to Han et al., (2011; 2009), behavioral intentions in the hotels industry are represented by three elements: intentions to visit the hotel, intentions to offer positive recommendations to others and willingness to pay a premium price. Lee et al. (2015) showed that green hotel guests were willing to spread positive recommendations and revisit the green hotel, whereas they were scarcely motivated to pay a premium price. In fact, studies on consumers’ willingness to pay for environmental sustainability

produced mixed results in the hospitality industry: while some consumers appear unwilling to pay a premium price for the offering of green services in hotels (e.g. Gao et al., 2016; Choi et al., 2015), others are willing to do so (Tang et al., 2017; Kang et al., 2012).

Concerning the other behavioural intentions, the findings suggest that customers who are environmentally friendly have greater intentions to visit a green hotel and to spread word-of-mouth about a green hotel and they actually do so (Han et al., 2011; 2010; 2009).

In that context, it is challenging to investigate customers' attitudes and behavioural intentions in a real hotel setting, because while many customers indicate that they would participate in green practices or they express positive behavioral intentions toward green hotels, their actual behaviors might not correspond with their stated intentions (i.e. actually purchase a hotel that proposes green initiatives).

In relation to the environmental dimension, only one study explores how the hotels train and motivate employees (Chan et al., 2017) in order to address sustainability. Due to the fact that this industry is a high contact service system where the relationships between consumers and employees can coproduce and co-create numerous challenges (Williams, 2006), a future focus on the role of employees education as key success factor for sustainability could be a relevant stream of study. Thus, in that scenario it would be valuable to deepen the concept of social entrepreneurship presented in a paper reviewed (Yeh et al., 2016) that can involve educating people and creating social awareness of the value of greening.

In fact, the study of environmental training is important because diffusion of environmental practices begins with the development of human resource capabilities through training. In that perspective, it is important to analyze the topic of environmental training under the lens of the findings emerged in an article reviewed (Huang et al., 2014) that showed that environmental protection consciousness positively affects environmentally friendly behaviours of people. Since beliefs about a concept have a considerable and direct impact on the individual's attitude toward that concept (Fishbein, 1963), it is relevant to consider also the personal beliefs about environmental issues as key factors in influencing the development of personal capabilities through environmental training. In particular, increased environmental awareness could increase the acceptance of green initiatives while supporting socially responsible business. It may be also beneficial for future research to analyze the relationship between environmental training and behavioral changes of employees, taking into account the personal beliefs regarding environmental issues as previously mentioned.

Concerning the social dimension, given that only one study investigates travel agency salespeople's environmentally-friendly behavior in a business to consumer context (Chen et al., 2014), future researches on the influential role of tourism service providers are needed. Accordingly, as the relevance of online tourism has come to the forefront in the last years (Kim et al., 2011), it would be important to deepen the research focus on the online travel agencies (e.g.

Booking.com) as well as on the online travel forum (e.g. Tripadvisor) in order to understand their role in implementing sustainability in a business to consumer view.

Along with the aforementioned stream of discussion, the adoption of a community-based approach in analyzing tourism development could be beneficial because it takes into account the involvement of different stakeholders as local communities, visitors and hotels through combining multiple point of views (i.e. improving the appreciation not only for the nature but also for the local culture as a part of the visitors experience, providing alternative employment for local communities, increasing visitors and locals awareness of conservation efforts, supporting the protection of natural areas by generating economic benefits,).

In addition, within the social dimension, the cultural subcategory appears as unexplored. In that scenario, basing on the indicators list developed by Mihalic et al. (2012), the investigation of the topic of food through examining the proportion of local dishes on offer could represent a promising field of research. In fact, food can play a vital role in delivering green services to customers (Jang et al., 2011). Moreover, the topic of local food remains largely unexplored in hotels because, as emerged in the literature review, the majority of research efforts have been focused on the analysis of different sustainable practices in hospitality such as recycling programs, energy efficiency, water conservation, waste management (i.e. Dimara et al., 2017; Chan, 2008, 2004; Mensah, 2006).

In conclusion, it is important to note that not all possible articles have been found in the literature review because the research was limited to contributions published in specific journals during a certain time frame (2000 to 2017). Therefore, the identified dominant orientations of sustainability in hotel industry may differ when analyzing articles published in other journals and during a different research period. Moreover, this review is not meant to be interpreted as exhaustive. In fact, as the nature of the analysis and synthesis is interpretive and subjective, scholars who take a different approach may interpret and organize the literature in different ways.

REFERENCES

- Ajzen, I. (1991), "The theory of planned behaviour", *Organizational Behaviour and Human Decision Processes*, Vol. 50 N. 2, pp. 179-211.
- Antonschmidt, H., Lund-Durlacher, D. (2018), "Can Direct Communication at the Point of Consumption Reduce the Attitude-Behavior Gap regarding Food Waste in Hotels?", Conference paper: BEST EN Think Tank XVIII: *Development and Marketing of Sustainable Tourism Products*, Switzerland
- Bapuji, H., Hora, M., Saeed, A. and Turner S. (2018), "How Understanding-Based Redesign Influences the Pattern of Actions and Effectiveness of Routines", *Journal of Management*, Vol. 45 N. 5, pp. 2132-2162.
- Barlow, P.M., Alley, W.M. and Myers, D.W. (2004), "Hydrologic aspects of water sustainability and their relation to a National Assessment of water availability and use", *Waste Resources Update*, Vol. 127, pp. 76-86.
- Bohdanowicz, P. (2005), "European hoteliers' environmental attitudes: Greening the business", *Cornell Hotel and Restaurant Administration Quarterly*, N. 46, pp. 188-204.
- Chamorro, A., Rubio, S. and Miranda, F.J. (2009), "Characteristics of research on green marketing", *Business Strategy and Environment*, Vol. 18, pp. 223-239.
- Chan, W.W. (2009), "Environmental measures for hotels' environmental management systems ISO 14001", *International Journal of Contemporary Hospitality Management*, Vol. 21 N. 5, pp. 542-60.
- Dimara, E., Manganari, E. and Skuras, D. (2017), "Don't change my towels please: Factors influencing participation in towel reuse programs", *Tourism Management*, N. 59, pp. 425-437.
- Elkington, J. (1998), *Cannibals with forks: The triple bottom line of 21st century business*, Stony Creek, CT: New Society.
- Fishbein, M. (1963), "An investigation of the relationship between beliefs about an object and the attitude toward that object", *Human Relations*, Vol. 16, pp. 233-240.
- Grazzini, L., Rodrigo, P., Aiello, G. and Viglia, G. (2018), "Loss or gain? The role of message framing in hotel guests' recycling behavior", *Journal of Sustainable Tourism*, pp. 1-23. 10.1080/09669582.2018.1526294.
- Griffin, T. and Delacey, T. (2003), "Green globe: sustainability accreditation for tourism", in Harris R, Griffin, T. and Williams, P. (Eds), *Sustainable Tourism – A Global Perspective*, Elsevier Butterworth- Heinemann, Oxford, pp. 58-88.
- Han, H., Hsu, L.-T. and Lee, J. S. (2009), "Empirical investigation of the roles of attitudes toward green behaviors, overall image, gender, and age in hotel customers' eco-friendly decision-making process", *International Journal of Hospitality Management*, Vol. 28, pp. 519-528.
- Han, H., Hsu, L.T.J., Lee, J.S. and Sheu, C. (2011), "Are lodging customers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions", *International Journal of Hospitality Management*, Vol. 30 N.2, pp. 345-355.
- Hsieh, Y. (2012), "Hotel companies' environmental policies and practices: a content analysis of their web pages", *International Journal of Contemporary Hospitality Management*, Vol. 24 N. 1, pp. 97- 121.
- Jang, Y.J., Kim, W.G. and Bonn, M.A. (2011), "Generation Y consumers' selection attributes and behavioural intentions concerning green restaurants International", *Journal of Hospitality Management*, Vol. 30, pp. 803-811.
- Kim, Y. and Han, H. (2010), "Intention to pay conventional-hotel prices at a green hotel a modification of the theory of planned behavior", *Journal of Sustainable Tourism*, Vol. 18 N. 8, pp. 997-1014.
- Kim, M., Chung, N. and Lee, C. (2011), "The effect of perceived trust on electronic commerce: Shopping online for tourism products and services in South Korea", *Tourism Management*, Vol. 32 pp. 256-265).
- Kim, S.H., Lee, K. and Fairhurst, A. (2017), "The review of "green" research in hospitality, 2000- 2014: Current

trends and future research directions", *International Journal of Contemporary Hospitality Management*, Vol. 29 N.1, pp.226-247.

Knight G. (1999). International service marketing: review of research 1980–1998. *Journal of Service Marketing* 13, (4/5), pp. 347–360.

Laroche, M., Bergeron, J. and Barbaro-Forleo, G. (2001), "Targeting consumers who are willing to pay more for environmentally friendly products", *The Journal of Consumer Marketing*, Vol. 18, pp. 503–518.

Manaktola, K. and Jauhari, V. (2007). "Exploring consumer attitude and behavior towards green practices in the lodging industry in India", *International Journal of Contemporary Hospitality Management*, Vol. 19 N. 5, pp. 364-77.

Mensah, I. (2006), "Environmental Management Practices among Hotels in the Greater Accra Region", *International Journal of Hospitality Management*, Vol. 25 N. 3, pp. 414-431.

Mihalic, T., Zabkar, V. and Cvelbar, L.K. (2012), "A hotel sustainability business model: evidence from Slovenia", *Journal of Sustainable Tourism*, Vol. 20 N. 5, pp. 701–719.

Myung, E. and McClaren, A. (2012), "Environmentally related research in scholarly hospitality journals: Current status and future opportunities", *International Journal of Hospitality Management*, N. 31, pp. 1264–1275.

Nair, V. and Hamzah A. (2015) "Successful community-based tourism approaches for rural destinations: The Asia Pacific experience", *Worldwide Hospitality and Tourism Themes*, Vol. 7 Issue: 5, pp. 429-443

O'Dwyer, B. and Owen, B.L. (2005), "Assurance statement practices in environmental, social and sustainability reporting: a critical evaluation", *The British Accounting Review*, Vol. 37 N. 2, pp. 205- 229.

Pizam, A. (2009), "Green hotels: a fad, ploy or fact of life?", *International Journal of Hospitality Management*, Vol. 28 N. 1.

UNWTO and UNEP, (2005). *Making tourism more sustainable: A guide for policy makers*. Madrid: Author.

Schoorman, T., Behrens, D., Kolek, B. and Knackstedt, E. (2016), "Sustainability in business models – a literature review based design science oriented research agenda", *Twenty-Fourth European Conference on Information Systems (ECIS)*, İstanbul, Turkey.

Stemler, S. (2001), "An overview of content analysis", *Practical Assessment, Research & Evaluation*, Vol. 7 N. 17, available at <http://pareonline.net/getvn.asp?v=7&n=17> (accessed 9 September 2017).

Weber, R.P. (1990), *Basic Content Analysis*, Sage, Newbury Park, CA.

Williams, A. (2006), "Tourism and hospitality marketing: fantasy, feeling and fun", *International Journal of Contemporary Hospitality Management*, Vol. 18 N. 6, pp. 482–495.

Wolfe, K.L. and Shanklin, C.W. (2001), "Environmental practices and management concerns of conference center administrators", *Journal of Hospitality & Tourism Research*, Vol. 25, pp. 209–216.

Zimmer, M.R., Stafford, T.F. and Stafford, M.R. (1994), "Green issues: dimensions of environmental concern", *Journal of Business Research*, Vol. 30 N. 1, pp.63-74.

Appendix A. Summary of references papers for literature review by author(s), year and dimension of sustainability.

Journal title (alphabetical order)	Author/s (Year order)	Sustainability dimension
Annals of Tourism Research	Kimberly et al. (2017)	Social (power&participation)
	Chen A. et al. (2014)	Social (power&participation)
	Chen A. et al. (2012)	Economic (marketing)
	Brambell et al. (2006)	Social (power&participation)
	Yen et al. (2006)	Social (human capital)
	Marin et al. (2002)	Social (power&participation)
Cornell Hospitality Quarterly	Chang et al. (2015)	Environmental (resources)
	Blose et al. (2015)	Economic (marketing)
	Baloglu et al. (2015)	Environmental (resources)
	Kahn et al. (2015)	Economic (financial)
	Barber et al. (2014)	Environmental (education)
	Zhang et al. (2014)	Social (power&participation)
	Susskind (2014)	Economic (marketing)
	Sánchez-Ollero et al. (2014)	Economic (financial)
	Lee S. et al. (2014)	Economic (marketing)
	Kim et al. (2014)	Economic (marketing)
	Baker et al. (2014)	Economic (marketing)
	Woodworth et al. (2014)	Economic (financial)
	Zhang et al. (2012)	Economic and Environmental
	Hu (2012)	Economic (marketing)
	Millar et al. (2011)	Economic (marketing)
López-Gamero et al. (2011)	Social (human capital) Butler	
	(2008)	Social (power&participation)
International Journal of Contemporary Hospitality Management	Yu et al. (2017)	Economic (marketing)
	Tang et al. (2017)	Economic (marketing)
	Prudhomme et al. (2016)	All
	Patiar et al. (2016)	Economic and Social
	Yeh et al. (2016)	Environmental (education)
	Yadav et al. (2016)	Economic (marketing)
	Wu et al. (2016)	Economic (marketing)
	Chathoth et al. (2016)	Economic (marketing)
	Martínez (2015)	Economic (marketing)
	Kasim (2015)	Economic and Environmental
	Rahman et al. (2015)	Economic (marketing)
	Jiang et al. (2015)	Economic (marketing)
	Wang (2014)	Social (power&participation)

	Park S. et al. (2014)	Social (human capital)
	Dhanda (2014)	Environmental (resources)
	Nyahunzvi (2013)	Social (power&participation)
	Slevitch et al. (2013)	Economic (marketing)
	Chan E. (2013)	Economic (marketing)
	Chan W. et al. (2013)	Environmental (resources)
	Hsieh (2012)	Social (power&participation)
	Grasl et al (2011)	Social (human capital)
	Chan W et al (2009)	Social (power&participation)
	Holcomb et al (2007)	Social (power&participation)
	Manaktola et al (2007)	Economic (marketing)
	Madan et al (2007)	Economic (financial)
	Chan W. et al (2006)	Social (power&participation)
	Chan W. et al (2001)	Environmental (resources)
International Journal of Hospitality Management	Reyes-Santiago et al. (2017)	Social (human capital)
	Hornig et al. (2017)	Environmental and Social
	Rahman et al. (2016)	Economic (marketing)
	Melissen et al. (2016)	Social (power&participation)
	Hanks L. et al. (2016)	Economic (marketing)
	Gao et al. (2016)	Economic (marketing)
	Lee et al. (2015)	Economic (marketing)
	Xu X at al. (2015)	Economic (marketing)
	Kang J. et al. (2015)	Economic (financial)
	Han H. et al. (2015)	Economic (marketing)
	Gatt et al. (2015)	Environmental (resources)
	Choi et al. (2015)	Economic (marketing)
	Huang et al. (2014)	Economic (marketing)
	Teng et al. (2014)	Economic (marketing)
	Singh et al. (2014)	Economic (financial)
	Benavides et al. (2014)	Social (power&participation)
	Pérez et al. (2014)	Social (power&participation)
	Park J. et al. (2014)	Social (human capital)
	Hsiao T. et al. (2014)	Economic and Environmental
	Geerts (2014)	Social (power&participation)
	Gao Y. et al. (2014)	Economic (marketing)
	Chan E. et al . (2014)	Social (human capital)
	Chen M. et al. (2014)	Economic (marketing)
	Miao L. et al. (2013)	Economic (marketing)
	Prudhomme et al. (2013)	Economic (marketing)
	Chan W. et al . (2013)	Economic (financial)
	Chan E. (2013)	Social (human capital)
	Berezan O et al. (2013)	Economic (marketing)

	Chan W. (2012)	Environmental (resources)
	Bastic et al. (2012)	Economic (marketing)
	Rahman et al. (2012)	Economic (financial)
	Assaf et al. (2012)	All
	de Grosbois (2012)	Social (power&participation)
	Kang K. et al . (2012)	Economic (marketing)
	Han H. et al. (2011)	Economic (marketing)
	Han H. et al. (2010)	Economic (marketing)
	Han H. et al. (2009)	Economic (marketing)
	Henderson (2007)	Social (power&participation)
	Mensah (2006)	Social (human capital)
	Bohdanowicz (2006)	Social (power&participation)
	Chan W. et al. (2002)	Environmental (resources)
Journal of Hospitality and Travel Researches	Chan W. et al. (2017)	Environmental (education)
	Albus et al. (2017)	Economic (marketing)
	Nunkoo et al. (2016)	Social (power&participation)
	Teng et al. (2015)	Economic (marketing)
	Walters et al. (2015)	Economic (marketing)
	Barber et al. (2014)	Economic (marketing)
	Miao L. et al. (2013)	Economic (marketing)
	Chan W. et al. (2001)	Environmental (resources)
	Jurowski et al. (2001)	Social (power&participation)
Journal of Sustainable Tourism	Perez-Pineda et al. (2017)	Social (power&participation)
	Ponnareddy et al. (2017)	Economic (marketing)
	Cvelbar et al. (2017)	Economic (marketing)
	Pratt et al. (2017)	Environmental (resources)
	Milder et al. (2016)	Environmental (Biodiversity)
	Line et al. (2016)	Economic (marketing)
	Han et al. (2015)	Economic (marketing)
	Davidson et al. (2015)	Social (power&participation)
	Zhang et al. (2015)	Social (power&participation)
	Razumova et al. (2015)	Environmental (resources)
	Kasim et al. (2014)	Environmental (resources)
	Cvelbar et al. (2013)	All
	Mihalic et al. (2012)	All
	Kuvan et al. (2012)	Social (power&participation)
	Radwan et al. (2012)	Environmental (resources)
	Bohdanowicz et al. (2011)	All
	Smerecnik et al. (2011)	Environmental (resources)
	Kim et al. (2010)	Economic (marketing)
	Lee J. et al. (2010)	Economic (marketing)

	Radwan et al. (2010)	Social (power&participation)
	El Dief et al. (2010)	Social (human capital)
	Chan W. et al. (2008)	Environmental (resources)
	Chan W et al. (2004)	Environmental (resources)
	Chan W et al. (2003)	Economic (financial)
	De Burgos et al. (2002)	Economic (financial)
Tourism Management	Dimara et al. (2017)	Economic (marketing)
	Arbelo-Perez. (2017)	Economic (financial)
	Mittal et al. (2016)	Social (human capital)
	Styles et al. (2015)	Environmental (resources)
	Leonidou et al. (2015)	Economic (financial)
	Hahn H. . (2015)	Economic (marketing)
	Gossling (2015)	Environmental (resources)
	Chou C. (2014)	Social (human capital)
	Leonidou et al. (2013)	Social (human capital)
	Gu et al. (2013)	Social (power&participation)
	Font et al. (2012)	Social (power&participation)
	Kytzia et al. (2011)	Social (power&participation)
	Confalonieri (2011)	Social (power&participation)
	Han H. et al. (2010)	Economic (marketing)
	Darcy (2010)	Economic (marketing)
	Erdogan et al. (2007)	Social (human capital)
	Warnken et al. (2005)	Environmental (resources)

Article

Food Sustainability as a Strategic Value Driver in the Hotel Industry

Claudia Cozzio ^{1,*}, Ludovico Bullini Orlandi ²  and Alessandro Zardini ² 

¹ Department of Economics and Management, University of Padua, Via del Santo 33, 35123 Padua PD, Italy

² Department of Business Administration, University of Verona, Via Cantarane 24, 37129 Verona VR, Italy; ludovico.bulliniorlandi@univr.it (L.B.O.); alessandro.zardini@univr.it (A.Z.)

* Correspondence: claudia.cozzio@phd.unipd.it

Received: 8 September 2018; Accepted: 22 September 2018; Published: 25 September 2018



Abstract: This paper aims at exploring the impact of green food on consumers' purchase attitudes toward a hotel stay and on consumers' behavioral intentions (i.e., intention to visit the hotel, intention to offer positive recommendations to others and willingness to pay a premium price), focusing on an Italian perspective where the food is a worldwide famous cultural element. This research employed a survey sent out by email to a database of contacts provided by an Italian company that operates in tourism. Data collection was completed in four weeks and the initial dataset counted 3586 of target respondents. A total of 302 surveys were completed and the data were analyzed through structural equation modeling (SEM). Firstly, an exploratory factor analysis (EFA) was performed, followed by a confirmatory factor analysis (CFA) that leads to the estimation of the structural model. The results show that personal beliefs toward green food are positively associated with respondents' purchase attitudes toward green food. Moreover, stronger purchase attitudes toward green food lead to more favorable purchase attitudes toward hotels that offer green food, further substantiating the investigation about whether or not consumers' attitudes employ similar concerns on sustainability for their daily purchases as well as for vacation products and services. In turn, the latter purchase attitudes are positively associated with individual behavioral intentions toward hotels that offer green food.

Keywords: sustainable food; green food; sustainability in hotels; consumer beliefs; purchase attitudes; behavioral intentions; structural equation modelling

1. Introduction

The supply-side of the tourism industry is trying to adopt sustainable practices [1,2] and, increasingly, going green emerged as a valuable competitive strategy in the hospitality industry [3–5]. As a result, hotel managers need to acquire a greater understanding of current and potential customers' desires and intentions for green consumption [3].

Despite some research efforts that have been focused in examining different sustainable practices in hospitality such as recycling programs, energy efficiency, water conservation, and waste management [6–9], the topic of food sustainability remains unexplored in this context, although the phenomenon is highly relevant, considering the experiential nature of the services and the products offered in the industry [10].

This study aims at addressing this omission. In fact, food can play an essential role in offering green services to customers [11]. More specifically, this paper aims at exploring the impact of green food on consumers' purchase attitudes toward a hotel stay and on consumers' behavioral intentions (i.e., intention to visit the hotel, intention to offer positive recommendations to others and willingness

to pay a premium price), putting a step further in the investigation about whether or not customers' concerns on sustainability are similar for their daily purchases as well as for their hotel stays.

In addition, the paper provides an all-embracing definition of food sustainability, addressing different dimensions of greenness. In fact, according to some scholars [11,12] it is safe to assume that the concept of green food embeds three main elements such as organic farming, locally grown food, and environmental sustainability. Thus, in addition to locally grown food seen to be produced and consumed within a particular geographical area, reducing the pollution associated with transportation [13], the concepts of organic farming and environmental sustainability emerge as fundamental. In particular, organic farming, as described by Hu et al. [14], prohibits the use of toxic synthetic pesticides and fertilizers, and the environmentally sustainable food supports the long-term maintenance of ecosystems and agriculture for the future generations [14]. In particular, the consumption of food with low environmental impacts is protective and respectful of biodiversity, culturally acceptable, economically fair because it optimizes natural and human resources [15]. In addition, it refers to animal welfare [16], the empowerment of the local culture and the avoidance of any forms of cultural destruction [17].

Basing on the aforementioned concepts, this research aims at investigating an all-embracing dimension of food sustainability considering three main components derived from the literature (i.e., organic farming, locally grown food, and environmental sustainability). The originality of the research lies in exploring the topic of food sustainability in the hotel scenario that is often defined by scholars in the field as an underexplored perspective [18].

In the following sections, the theoretical background of this study and the research hypotheses are presented. Then, this paper develops an empirical survey that tests the hypothesis through structural equation modeling (SEM). The conclusion and the managerial implications of the results are hereafter developed.

2. Literature Review and Research Hypothesis

2.1. Consumers' Beliefs Toward Green Food

Many scholars argued that beliefs about a concept have a considerable and direct impact on the individual's attitude toward that concept [19,20]. In particular, beliefs are considered to be cognitively derived structures, while attitudes emerged to be evaluative in nature [19]. In that perspective, beliefs are key components in the creation of attitudes since attitudes toward an object flow logically and automatically from an individual's beliefs concerning the aforementioned object [20].

In the hospitality literature, when consumers believe that green consumption decisions will benefit themselves as well as the external environment, they are more in favor of behaving in an environmentally responsible way. In particular, Huang et al. [21] showed that environmental protection consciousness positively affects environmentally friendly behavior of hotel guests.

Therefore, environmental concerns are positively related to consumers' intentions to purchase green products. For instance, Laroche et al. [22] found that environmentally conscious customers who consider ecological issues have a positive attitude toward green behaviors. In addition, in the hospitality industry, Manaktola and Jauhari [4] found that customers that have a great awareness of problems regarding the environment prefer to make eco-friendly purchases.

This research supports the notion of the positive relation between beliefs and purchase attitudes, and it postulates the following hypothesis:

Hypothesis 1 (H1). *Consumers' beliefs about green food attributes have a positive impact on general purchase attitudes toward green food.*

This paper focuses on an all-embracing concept of green food that considers different dimensions of greenness as derived from the literature [11,12]. Accordingly, it is safe to assume that the concept of green food includes three main components such as organic farming, locally grown food, and

environmental sustainability. Organic farming refers to agriculture products produced without using pesticides, antibiotics, and genetic modifications [14], local food is seen as produced and consumed within a particular geographical area and environmentally sustainable food is showed as protective and respectful of biodiversity and ecosystems [15]. In addition, the latter dimension includes also animal welfare [16], the empowerment of the local culture and the avoidance of any forms of cultural destruction [17].

2.2. Consumers' Purchase Attitudes Toward Green Food in the Hotel Industry

This research aims at investigating whether or not consumers' concerns on sustainability are similar for their daily purchases as well as for their vacation products and services (i.e., hotel stay).

In that context, although it seems rational and logical to suppose that individuals who adopt environmentally friendly behaviors at home will also show environmental awareness in a hotel setting, few studies investigate this empirically [23].

Moreover, while environmentally friendly behaviors in household settings have been broadly investigated, research in hospitality settings is scant [24]. For instance, Clark and Finley [25] found that the degree to which people show awareness of problems concerning the climate change and future water shortages displayed positive and significant correlations with the intention to implement specific water conservation practices at home. Additionally, Gregory and Di Leo [26] suggested that environmental awareness, personal involvement, habits and situational factors (e.g., income) emerged as key drivers for implementing water consumption behaviors in the household settings.

Prior research revealed that environmentally friendly behaviors are more persistent in a household setting while such behaviors in a hotel setting are strongly related to external aspects such as personal comfort, convenience, and cost [24]. In particular, given an increasing awareness of ecological problems, consumers engage in environmentally friendly behaviors in their everyday purchases [25,27]. As environmental awareness increases, consumers with a high degree of consciousness on environmental problems make effort to solve them and they tend to prefer to book an environmentally friendly property instead of a non-green property [3,4,28,29].

For example, many guests prefer to stay in an environmentally friendly property not only for a matter of intrinsic quality characteristics (e.g., allergen-free features), but also for the personal emotions experienced in an environmentally friendly property (e.g., preserving the long-term maintenance of the environment for the future generations) [28]. In other words, such emotional and intangible benefits might drive consumer preferences in the hospitality industry. Additionally, Pereira et al. [30] emphasized that individuals who recognized the importance of sustainable issues in daily purchases are in favor of acknowledging the relevance of purchasing sustainable product also in the hospitality context. Moreover, the authors stated that the concept of sustainability emerged as essential in relation to vacation products and services.

Therefore, this paper expects that general purchase attitudes toward green food will significantly affect purchase attitudes toward a hotel that offers green food. Hence the following hypothesis is proposed:

Hypothesis 2 (H2). *General purchase attitudes toward green food positively impact purchase attitudes toward a hotel that offers green food.*

2.3. Consumers' Behavioral Intentions Toward Green Food in Hotel Industry

The link between attitudes and behavioral intentions has been broadly investigated and it continues to be studied in the consumer behavior literature. The theory of planned behavior [29,31] postulates that individual's behavioral intentions derived from personal attitudes toward the behavior. Accordingly, for the theory of planned behavior, attitudes are antecedents to behavioral intentions [29,31], while beliefs represent the immediate precursor of attitudes [32,33].

Basing on Ajzen's [33] theory of planned behavior, some scholars have investigated attitudes as key drivers of consumers' behavioral intentions toward green hotels and restaurants (e.g., [34–38]).

According to Han et al., [3,28], within the hospitality literature, behavioral intentions were represented by three elements: intentions to visit the hotel, intentions to offer positive recommendations to others and willingness to pay a premium price.

In particular, Lee et al. [38] showed that green hotel guests were willing to spread positive recommendations and revisit the green hotel, whereas they were scarcely motivated to pay a premium price. In fact, studies on consumers' willingness to pay for environmental sustainability produced mixed results in the hospitality industry. In particular, some consumers appear unwilling to pay a premium price for the offering of green services in hotels [4,39,40], while others are willing to do so [41–43].

Despite the conflicting findings, this research supports the perspective of the positive relation between purchase attitudes and behavioral intentions, proposing the following hypothesis:

Hypothesis 3a (H3a). *Purchase attitudes toward a hotel that offers green food positively impact Willingness to Pay (WTP) for a hotel that offers green food.*

Concerning the other behavioral intentions, the intention to visit a green hotel is a behavior that contains elements of personal morality and social responsibility [35], while word of mouth represents a powerful and valuable tool in transferring information within the hospitality industry [44]. In that context, prior researches suggest that customers who are environmentally friendly have greater intentions to visit a green hotel and to spread word-of-mouth about a green hotel and they actually do so [3,28,29]. Therefore, this study postulates the following:

Hypothesis 3b (H3b). *Purchase attitudes toward a hotel that offers green food positively impact intention to visit (ITV) a hotel that offers green food.*

Hypothesis 3c (H3c). *Purchase attitudes toward a hotel that offers green food positively impact word of mouth (WOM) about a hotel that offers green food.*

In conclusion, this paper adopts the aforementioned theoretical foundation from which the following conceptual model is derived (see Figure 1):

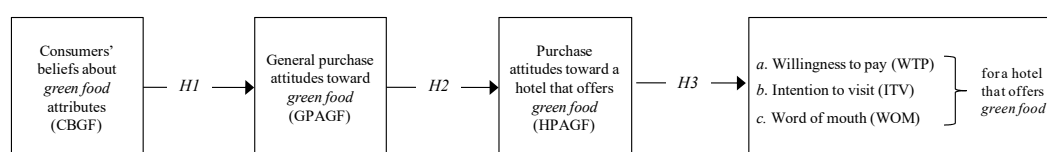


Figure 1. The conceptual model.

Based on the aforementioned theoretical framework, this study aims at investigating the impact of consumers' beliefs about green food (CBGF) on consumers' purchase attitudes toward daily green food purchases (GPAGF), which are likely to affect the purchase attitudes toward a hotel that offer green food (HPAGF). In turn, the conceptual model hypothesizes that the latter purchase attitudes influence individual behavioral intentions toward hotels that offer green food (i.e., willingness to pay a premium price [WTP], intention to visit [ITV], intention to offer positive recommendations [WOM]).

3. Methodology

3.1. The Questionnaire

The questionnaire consists of five sections and the measures derived from a wide review of the literature.

Table 1. Constructs, items, and sources.

Construct	Items #	Key Areas	Scale Items (Item Loading)	Source
Consumer beliefs about green food attributes (CBGF)	FBE 1	Environment	<i>Consumers perceptions about green food attributes:</i> It is related to environmental protection (0.73)	[45–47]
	FBE 2	Environment	It not breaks the balance of the nature (0.80)	
	FBE 3	Environment	It is produced with acceptance of ethical standard (0.72)	
	FBH 1	Health	It supports a healthy diet (0.74)	
	FBH 2	Health	It has no harmful ingredients (0.84)	
	FBH 3	Health	It has high safety standards (0.77)	
	FBS	Sensory	It has a pleasant taste (0.61)	
	FBP	Price	It has not a good value-for-money (0.41)	
General purchase attitudes toward green food (GPAGF)	GPAO 1	Price	I do not mind paying higher prices for organic food (0.58)	[48,49]
	GPAO 2	Health	It is important for me to buy natural products (0.81)	
	GPAI 1	Information	To me product information is of high importance. I need to know what the product contains (0.89)	
	GPAI 2	Information	I compare labels to select the food that I consider more beneficial to health (0.74)	
	GPAL	Ethical concerns	I prefer to buy food produced in my country (0.44)	
Purchase attitudes toward a hotel that offers green food (HPAGF)	HPAB 1	Brand	<i>When I consider buying a vacation in hotel, I consider important that:</i> The food has brand as a trustful element for certifying food production methods (0.90)	[50–52]
	HPAB 2	Brand	The food has brand as a trustful element for certifying environmentally friendly food (0.89)	
	HPAH 1	Health	The food contains natural ingredients (0.90)	
	HPAH 2	Health	The food contains no artificial ingredients (0.77)	
	HPAH 3	Health	The food is certified free of chemicals and hormone residues (0.89)	
	HPAE 1	Environment	The food is produced in a way that preserves its natural goodness (0.86)	
	HPAE 2	Environment	The food is produced in an environmentally friendly way (0.85)	
	HPAE 4	Environment	The food is produced in a way that has not shaken the balance of nature (0.79)	
	HPAL	Local	The food is grown locally (0.46)	
	HPAP	Price	The food served in the hotel has a good value-for-money (0.41)	
Willingness to pay (WTP)	WTP1		I am willing to spend extra to stay in a hotel that offers green food (0.98)	
	WTP2		It is acceptable to pay more for a hotel that offers green food (0.89)	
	WTP3		I am willing to pay more for a hotel that offers green food (0.91)	
Intention to visit (ITV)	ITV1		I am willing to stay at a hotel that offers green food when I'm travelling (0.62)	[28,29,34,38,52]
	ITV2		I plan to stay at a hotel that offers green food when I'm travelling (0.82)	
	ITV3		I will make an effort to stay at a hotel that offers green food when I'm travelling (0.82)	
Word of mouth (WOM)	WOM1		If someone is looking for a hotel, I will suggest to him/her to stay in a hotel that offers green food (0.75)	
	WOM2		I will positively talk about an hotel that serves green food (0.40)	
	WOM3		I encourage my friends and relative to stay in a hotel that offers green food (0.72)	

The first section refers to personal beliefs about green food attributes. Survey participants were asked to indicate for a variety of green food attributes their level of agreement or disagreement according to a seven-point Likert scale. Measures for consumers' beliefs toward green food attributes were adopted from prior researches focused on green products [45,46]. The measurement scale comprised eight items taking the form: "How strongly do you agree or disagree with the following statements?". Following the studies mentioned above, four key attributes' areas emerged related to environment, health, sensory, and price (Table 1).

The second section aims at investigating the general purchase attitudes toward green food in everyday lives. Respondents were asked to evaluate their level of agreement on each item on a seven-point Likert scale. The five statements of this questionnaire's section were derived from a food choice questionnaire (FCQ) as described by Steptoe et al. [48] and a food-related lifestyle questionnaire developed by Grunert et al. [49]. In particular, the FCQ consisted of items referring to aspects such as health, price and ethical concerns, while the items derived from Grunert et al. [49] referred to the importance of product information (Table 1).

The third section contains questions to evaluate purchase attitudes toward a hotel that offers green food. The measurement scale comprised ten items taking the form: "When I consider buying a vacation in hotel, I consider important that", ranging from strongly disagree (1) to strongly agree (7). In particular, eight items were adapted from Lockie's et al. [50] food consumption questionnaire pointing out different key attributes' areas related to health, environmental protection, locally grown or not, and price (Table 1). In addition, two items were adapted from Krystallis et al. [51] range of trust items that comprise trust in a quality logo and trust food certification bodies. The items were slightly modified for the context of trust a food brand in a hotel (Table 1).

The fourth section explores the behavioral intentions: the key dimensions of behavioral intentions include revisit intention, word-of-mouth intention and willingness to pay [53]. The measurement items were generated in coherence with previous researches [28,29,34,38]. In particular, the items were adapted for the context of a hotel that offers green food and all the constructs were measured with multiple items through a seven-point Likert scale. Multi-item scales were used to assess the constructs (Table 1).

The last section includes questions about demographic information such as gender, age, level of education, household income and frequency of a hotel stay in the past 12 months [28].

3.2. Data Collection and Sample Characteristics

This research employed a survey that was developed and refined in collaboration with two experts of the topic from academia and two from tourism business field. A pretest on a subsample of 40 respondents was conducted in order to verify the efficacy of the constructs.

Therefore, an online survey was conducted, and a questionnaire was purposefully designed through Google Form. The utilization of an online survey is becoming acceptable in the academic research because it is easier to obtain more candid response [28,29].

The opening instructions of the survey defined clearly the concept of green food as understood to be organic, local and sustainable [11,12]. In particular the survey opens as follows: The following questionnaire aims at investigating the concept of green food within the hotel industry. Based on the definition adopted from the literature [11,12], the term green food refers equally to organic certified food (i.e., food produced without the use of chemicals), locally grown food (i.e., food produced and consumed within a particular geographical area), environmentally sustainable food (i.e., food protective and respectful of biodiversity and ecosystems). The survey was sent out by email to a database of contacts provided by an Italian domestic hotel chain that manages three seaside resorts located in the south of Italy. The target consumers of the three resorts are homogeneous and the services offered are similar and standardized among the three resorts. The database comprised potential clients who have asked for a quotation through the company website (from October 2016 to May 2017). The domestic hotel chain was chosen as a set of analysis due to its scarce sensibility to sustainable

issues in tourism. In that way, the domestic hotel chain represents a neutral setting that guarantees candid response based on respondents' personal opinions. Additionally, the authors chose to focus specifically on the potential customers in order to rely on objective point of views not influenced by the stay at the hotels.

Data collection took place from 10 July 2017 to 6 August 2017, with one reminder email sent on 30 July 2017. The collection of questionnaires complied with Italian privacy laws and aggregate use of the data was assured to the respondents. Data collection was completed in four weeks and the initial dataset counted 3.586 of target respondents. A total of 302 surveys were completed and usable for an 8.42% of response rate.

Table 2 shows the descriptive statistics of the sample.

Table 2. Sample characteristics.

Demographic	Count	(%)
<i>Gender</i>		
Female	148	49.0
Male	154	51.0
<i>Age</i>		
Born between 1946 and 1964 (Baby Boomers)	82	27.2
Born between 1965 and 1980 (Gen X)	165	54.6
Born between 1981 and 2000 (Gen Y)	55	18.2
<i>Study level</i>		
Primary School	17	5.6
High School	145	48.0
University Degree	114	37.7
Post-graduate professional degree	21	7.0
Ph.D.	5	1.7
<i>Income</i>		
<15,000	42	13.9
between 15,001 and 28,000	131	43.4
between 28,001 and 55,000	106	35.1
between 55,001 and 75,000	21	7.0
>75,001	2	0.7
<i>Number of times stayed in hotels in the past 12 months</i>		
None	6	2.0
Once	75	24.8
between 2 and 4	167	55.3
more than 4	54	17.9

4. Data Analysis and Results

4.1. Preliminary Data Analysis

In order to verify the set of theoretical hypotheses, this study employed the correlation-based structural equation modelling (CB-SEM). This type of method is more suitable for theory testing, especially in case of not too complex models with a sufficiently large number of observations [54].

Before starting the analysis of the CB-SEM, some preliminary data analyses were performed to address the following issues: non-response bias, multicollinearity, common method variance (CMV).

The preliminary data analysis and the exploratory factor analysis (EFA) were performed with SPSS (v. 23). Instead, the confirmatory factor analysis (CFA) and the estimation of the structural model were performed with the R package, lavaan.

This research employed late respondents as a proxy for non respondents to check for nonresponse bias, and the *t*-test to compare the differences between early and late respondents. The findings do not display significant differences, suggesting that nonresponse bias is not an issue in this study.

The VIF scores were calculated to test the possible multicollinearity: all the variance inflation factors range from 1.29 to 1.81, largely below the suggested threshold of five [55].

During the development of the survey and the data collection, the best practices to control the CMV were followed such as assuring anonymity to the respondents and avoiding items' social desirability, demand characteristics and ambiguity [56]. Once the data were collected, Harman's single-factor test was employed to verify the presence of common method bias [56]. The first single factor in the unrotated factor matrix explained the 37.5% of the variance, fairly below the suggested 50% threshold.

4.2. The Analysis of Reliability, Convergent and Discriminant Validity

The model was also tested to check the level of reliability, convergent validity, and discriminant validity.

Reliability was assessed reporting the Cronbach's alpha (CA) and the Composite Reliability (CR) scores (Table 3). The findings suggest that they are all above the recommended threshold of 0.7 [57].

Almost all the average variances extracted (AVE) exceed the recommended threshold of 0.5, suggesting convergent validity [58]. In that context, only the CPGF constructs appear slightly below the threshold (0.42).

Anyway, since the squared root of AVE is always greater than each of the other inter-constructs correlations, this evidence suggests the presence of discriminant validity [58].

Table 3. Assessment of constructs' convergent and discriminant validity.

Constructs	M	SD	CR	CA	AVE	1	2	3	4	5	6
1. CBGF	5.39	0.94	0.85	0.85	0.42	0.65					
2. GPAGF	5.91	0.96	0.86	0.75	0.52	0.46	0.72				
3. HPAGF	6.01	0.98	0.93	0.94	0.81	0.39	0.63	0.90			
4. WTP	4.64	1.56	0.93	0.93	0.82	0.31	0.39	0.38	0.91		
5. ITV	4.66	1.44	0.87	0.86	0.69	0.43	0.56	0.48	0.73	0.83	
6. WOM	5.44	1.26	0.86	0.85	0.68	0.49	0.59	0.52	0.69	0.80	0.82

1. M = mean; SD = standard deviation; CR = Composite reliability; CA = Cronbach's alpha; AVE = average variance extracted. 2. Numbers on the diagonal are the square root of AVEs. The other numbers are correlations among constructs.

4.3. Results of the Measurement Model

To test the measurement model, an EFA was first performed and, in terms of factor loadings, all the items' loadings are greater than 0.5, except for two that are greater than 0.4 (Table 1). Anyway, also values greater than 0.4 are considered statistically significant factor loadings [57] due to the relevant sample size of the study.

The measurement model was also validated employing CFA, and the results display an adequate fit index, suggesting good fit between measurement model and data (Table 3). The CFA displays a χ^2 of 1170.3 with 480 df and a ratio of χ^2 /df equal to 2.43, less than 3:1 as suggested in the literature [57]. The other indices CFI = 0.90, GFI = 0.97, AGFI = 0.96 and RMSEA = 0.069 respect the recommended threshold for good fit [57].

The resulting model strongly supports the theoretical hypothesis (Table 4).

Table 4. Results of the structural model.

Hypothesis	Path	Estimate	Standard Error	z-Value	p-Value	Decision
H1	GPAGF ← CBGF	0.54	0.07	7.95	0.000	Supported
H2	HPAGF ← GPAGF	0.74	0.07	10.59	0.000	Supported
H3a	WTP ← HPAGF	0.69	0.10	7.06	0.000	Supported
H3b	ITV ← HPAGF	0.80	0.10	8.25	0.000	Supported
H3c	WOM ← HPAGF	0.88	0.09	9.57	0.000	Supported

The results show that the relationship between consumer beliefs about green food attributes (CPGF) and general purchase attitudes towards green food (GPAGF)—i.e., H1—is significant due to the presence of a positive coefficient of 0.54 and p -value < 0.001 .

The second hypothesis (H2) which represents the relation between general purchase attitudes toward green food (GPAGF) and the purchase attitudes toward a hotel that offers green food (HPAGF) is supported given the presence of a coefficient of 0.74 and p -value < 0.001 .

Lastly, concerning the three hypotheses about the impact of the purchase attitudes toward a hotel that offers green food (HPAGF) on the consumers' behavioral intentions, the empirical results support all of them, in fact:

- H3a that hypothesizes the positive relation between HPAGF and willingness to pay (WTP) is supported by the presence of a positive coefficient of 0.69 and p -value < 0.001 ;
- H3b that hypothesizes the relation between HPAGF and intention to visit (ITV) is supported by the presence of a positive coefficient of 0.80 and p -value < 0.001 ;
- H3c that hypothesizes the relation between HPAGF and intention to give positive recommendations to others (WOM) is supported by the presence of a positive coefficient of 0.88 and p -value < 0.001 .

5. Discussion and Conclusions

This study aims at exploring the impact of green food on consumers' purchase attitudes toward a hotel stay and on consumers' behavioral intentions (i.e., intention to visit the hotel, intention to offer positive recommendations to others and willingness to pay a premium), focusing on an Italian perspective. Prior researches showed that the concept of food sustainability in the hospitality industry appears underexplored since more relevance was given to the investigation of other sustainable practices in the field such as recycling programs (i.e., towel reuse) and energy efficiency [6,7].

The results show that personal beliefs toward green food, as immediate precursors to the attitudes [32,33], are positively associated with respondents' purchase attitudes toward green food. Moreover, stronger purchase attitudes toward green food lead to greater purchase attitudes toward hotels that offer green food. Hence, both H1 and H2 are supported.

In turn, the latter purchase attitudes are positively associated with individual behavioral intentions toward hotels that offer green food. Hence H3a, H3b, H3c are also supported. These results are in line with the previous research findings [4,26,29] in terms of attitudes as antecedents to behavioral intentions.

Hence, beliefs are found to positively affect purchase attitudes toward green food, which exert a positive influence on purchase attitudes toward a hotel that offers green food which, in turn, contribute to more favorable behavioral intentions.

Moreover, the significant and positive effect between general purchase attitudes toward green food and purchase attitudes toward a hotel that offers green food puts a step further in the investigation about whether or not consumers' considerations on sustainable issues regarding green food are similar for their daily purchases as well as for vacation products and services. Since few studies investigate this empirically [23], the research findings are particularly relevant because they strengthen an unexplored relation and they shed light upon the topic of green food that represents an underexplored perspective in the hospitality context [20]. In addition, the findings are in line with the theoretical concept of selfish altruism proposed by Miller [59]. Miller [59] emphasized this concept by describing how environmentally conscious consumers are more disposed to purchase products that are of benefit to them as well as to the external environment, rather than just to the rest of world. The fact that the H3a, H3b, and H3c are supported with positive and significant coefficients corroborates and validates the concept of selfish altruism. In other words, in the case of green food the personal (healthiness/wellbeing) and external (environmental) benefits appear well balanced and mixed together. In fact, the term green food embeds the concept of organic farming, locally grown food, and environmental sustainability—features that in turn contribute to the environmental protection and

offer nutritional and health advantages. Moreover, the originality of the paper lies in adopting the aforementioned all-embracing concept of food sustainability composed by three different dimensions of greenness derived from the literature [11,12] such as organic farming, locally grown food, and environmental sustainability.

Adopting a pragmatic lens, the current study could be considered as a precursor of an emerging field in tourism called agritourism and it sheds light upon the readiness of the market toward this new trend. In particular, agritourism offers farmers the possibility of diversifying and becoming hoteliers through on-farm touristic activities. This helps to maintain the viability of active farms and rural communities and to promote agricultural resources, traditions and culture.

Additionally, the study provides practitioners with a detailed understanding of consumer attitudes and behavioral intentions toward green food in hotel industry, revealing that it is important for hotels to implement promotional incentives in order to make their green practices visible to consumers. In particular, they should effectively communicate the hotel's comprehensive green food philosophy in order to ensure that guests are well-informed. In that context, redesigning hotel menus by presenting information on the nutritional qualities of food together with the indication of the food provenance could be an important issue to address the need of health and personal well-being consciousness and to foster the progress of hospitality practitioners towards the goal of environmental sustainability.

While the current research has shed some lights on several significant issues, there are some limitations that reveal the opportunity for future studies. First, future studies should include other cultures for further comparisons since the study has a marked Italian perspective. Hence, one should be careful with any generalizations to other cultures. Second, it is important to note that the current research tested for behavioral intentions, which do not necessarily lead to actual behaviors (i.e., actually purchase a hotel that offers green food). In particular, for future studies, a valuable attempt would be represented by the investigation of actual tourists' consumption patterns in response to green food promotional campaigns in a real hotel setting. In addition, since from the literature the concept of food sustainability embeds three main components (i.e., organic farming, locally grown food, and environmental sustainability), future research should investigate the influential power of each specific dimension of greenness in promoting food sustainability in the hotel industry.

Author Contributions: Conceptualization, C.C.; methodology, software, validation, formal analysis L.B.O.; investigation, resources, data curation, C.C.; writing—original draft preparation, C.C., L.B.O. and A.Z.; supervision, A.Z.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Griffin, T.; Delacey, T. Green globe: Sustainability accreditation for tourism. In *Sustainable Tourism—A Global Perspective*; Harris, R., Griffin, T., Williams, P., Eds.; Elsevier Butterworth-Heinemann: Oxford, UK, 2003; pp. 58–88.
2. Zimmer, M.R.; Stafford, T.F.; Stafford, M.R. Green issues: Dimensions of environmental concern. *J. Bus. Res.* **1994**, *30*, 63–74. [[CrossRef](#)]
3. Han, H.; Hsu, L.-T.; Lee, J.S. Empirical investigation of the roles of attitudes toward green behaviours, overall image, gender, and age in hotel customers' eco-friendly decision-making process. *Int. J. Hosp. Manag.* **2009**, *28*, 519–528. [[CrossRef](#)]
4. Manaktola, K.; Jauhari, V. Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *Int. J. Contemp. Hosp. Manag.* **2007**, *19*, 364–377. [[CrossRef](#)]
5. Wolfe, K.L.; Shanklin, C.W. Environmental practices and management concerns of conference center administrators. *J. Hosp. Tour. Res.* **2001**, *25*, 209–216. [[CrossRef](#)]
6. Dimara, E.; Manganari, E.; Skuras, D. Don't change my towels please: Factors influencing participation in towel reuse programs. *Tour. Manag.* **2017**, *59*, 425–437. [[CrossRef](#)]

7. Chan, W.W. Environmental measures for hotels' environmental management systems ISO 14001. *Int. J. Contemp. Hosp. Manag.* **2009**, *21*, 542–560. [[CrossRef](#)]
8. Mensah, I. Environmental Management Practices among Hotels in the Greater Accra Region. *Int. J. Hosp. Manag.* **2006**, *25*, 414–431. [[CrossRef](#)]
9. Mehta, H.; Riba, A.; Baez, A.; O'Loughlin, P. *International Ecotourism Guidelines*; The International Ecotourism Society, OMT, WTO, BTO: Burlington, VT, USA, 2002.
10. Williams, A. Tourism and hospitality marketing: Fantasy, feeling and fun. *Int. J. Contemp. Hosp. Manag.* **2006**, *18*, 482–495. [[CrossRef](#)]
11. Jang, Y.J.; Kim, W.G.; Bonn, M.A. Generation Y consumers' selection attributes and behavioural intentions concerning green restaurants International. *J. Hosp. Manag.* **2011**, *30*, 803–811. [[CrossRef](#)]
12. LaVecchia, G. Green: The new gold. *Restaur. Hosp.* **2008**, *92*, 36–47.
13. Pizam, A. Green hotels: A fad, ploy or fact of life? *Int. J. Hosp. Manag.* **2009**, *28*, 1. [[CrossRef](#)]
14. Hu, H.; Parsa, H.G.; Self, J. The dynamics of green restaurant patronage. *Cornell Hosp. Q.* **2010**, *51*, 344–362. [[CrossRef](#)]
15. Burlingame, B.; Dernini, S. Sustainable diets and biodiversity. Direction and solutions for policy, research and action. In Proceedings of the International Scientific Symposium Biodiversity and Sustainable Diets United Against Hunger, Rome, Italy, 3–5 November 2010; FAO Headquarter: Rome, Italy, 2010.
16. Naspetti, S.; Zanolini, R. Organic Food Quality and Safety Perception throughout Europe. *J. Food Prod. Mark.* **2009**, *15*, 249–266. [[CrossRef](#)]
17. Nukoo, R. Governance and Sustainable Tourism: What is the Role of Trust, Power and Social Capital? *J. Destin. Mark. Manag.* **2017**, *6*, 277–285.
18. Kim, S.; Lee, K.; Fairhurst, A. The review of green research in hospitality, 2000–2014: Current trends and future research directions. *Int. J. Contemp. Hosp. Manag.* **2017**, *29*, 226–247. [[CrossRef](#)]
19. Fishbein, M.; Raven, B.H. The AB scales: An operational definition of belief and attitude. *Hum. Relat.* **1962**, *15*, 35–44. [[CrossRef](#)]
20. Ajzen, I. The theory of planned behaviour: Reactions and reflections. *Psychol. Health* **2011**, *26*, 1113–1127. [[CrossRef](#)] [[PubMed](#)]
21. Huang, H.; Lin, T.; Lai, M.; Lin, T. Environmental consciousness and green customer behaviour: An examination of motivation crowding effect. *Int. J. Hosp. Manag.* **2014**, *40*, 139–149. [[CrossRef](#)]
22. Laroche, M.; Bergeron, J. And Barbaro-Forleo, G. Targeting consumers who are willing to pay more for environmentally friendly products. *J. Consum. Mark.* **2001**, *18*, 503–518. [[CrossRef](#)]
23. Dolnicar, S.; Leisch, F. An investigation of tourists' patterns of obligation to protect the environment. *J. Travel Res.* **2008**, *46*, 381–391. [[CrossRef](#)]
24. Miao, L.; Wei, W. Consumers' pro-environmental behaviour and the underlying motivations: A comparison between household and hotel setting. *Int. J. Hosp. Manag.* **2013**, *32*, 102–112. [[CrossRef](#)]
25. Clark, W.A.; Finley, J.C. Determinants of water conservation intention in Blagoevgrad, Bulgaria. *Soc. Nat. Resour. Int. J.* **2007**, *20*, 613–627. [[CrossRef](#)]
26. Gregory, D.G.; Di Leo, M. Repeated behaviour and environmental psychology: The role of personal involvement and habit formation in exploring water consumption. *J. Appl. Soc. Psychol.* **2003**, *33*, 1261–1296. [[CrossRef](#)]
27. Kalafatis, S.P.; Pallard, M.; Markos, R.E. Green marketing and Ajzen's theory of planned behaviour: A cross-market examination. *J. Consum. Mark.* **1999**, *16*, 441–460. [[CrossRef](#)]
28. Han, H.; Hsu, L.T.-J.; Lee, J.-S.; Sheud, C. Are lodging customers ready to go green? An examination of attitudes, demographics, and eco-friendly intentions. *Int. J. Hosp. Manag.* **2011**, *30*, 345–355. [[CrossRef](#)]
29. Han, H.; Kim, Y. An investigation of green hotel customers' decision formation: Developing an extended model of the Theory of Planned Behaviour. *Int. J. Hosp. Manag.* **2010**, *29*, 659–668. [[CrossRef](#)]
30. Pereira, E.M.V.; Mykletun, R.J.; Hippolyte, C. Sustainability, daily practices and vacation purchasing: Are they related? *Tour. Rev.* **2012**, *7*, 40–54. [[CrossRef](#)]
31. Ajzen, I.; Fishbein, M. *Understanding Attitudes and Predicting Social Behaviour*; Prentice-Hall: Englewood Cliffs, NJ, USA, 1980.
32. Ajzen, I. The theory of planned behaviour. *Organ. Behav. Hum. Decis. Process.* **1991**, *50*, 179–211. [[CrossRef](#)]
33. Fishbein, M.; Ajzen, I. *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*; Addison-Wesley: Reading, MA, USA, 1975.

34. Line, N.D.; Hanks, L. The effects of environmental and luxury beliefs on intention to patronize green hotels: The moderating effect of destination image. *J. Sustain. Tour.* **2015**, *24*, 1–22. [[CrossRef](#)]
35. Chen, M.F.; Tung, P.J. Developing an extended theory of planned behaviour model to predict consumers' intention to visit green hotels. *Int. J. Hosp. Manag.* **2014**, *36*, 221–230. [[CrossRef](#)]
36. Kim, Y.J.; Njite, D.; Hancer, M. Anticipated emotion in consumers' intentions to select eco-friendly restaurants: Augmenting the theory of planned behaviour. *Int. J. Hosp. Manag.* **2013**, *34*, 255–262. [[CrossRef](#)]
37. Teng, Y.M.; Wu, K.S.; Liu, H.H. Integrating altruism and the theory of planned behaviour to predict patronage intention of a green hotel. *J. Hosp. Tour. Resour.* **2013**, *39*, 299–315. [[CrossRef](#)]
38. Lee, J.; Hsu, L.; Heesup, H.; Yunhi, K. Understanding how consumers view green hotels: How a hotel's green image can influence behavioural intentions. *J. Sustain. Tour.* **2010**, *18*, 901–914. [[CrossRef](#)]
39. Choi, G.; Parsa, H.G. Green practices II: Measuring restaurant managers' psychological attributes and their willingness to charge for the green practices. *J. Food Serv. Bus. Res.* **2007**, *9*, 41–63. [[CrossRef](#)]
40. Carrigan, M.; Attalla, A. The myth of the ethical consumer—do ethics matter in purchase behaviour? *J. Consum. Mark.* **2001**, *18*, 560–578. [[CrossRef](#)]
41. Tang, C.M.F.; Lam, D. The role of extraversion and agreeableness traits on Gen Y's attitudes and willingness to pay for green hotels. *Int. J. Contemp. Hosp. Manag.* **2017**, *29*, 607–623. [[CrossRef](#)]
42. Kang, K.H.; Stein, L.; Heo, C.Y.; Lee, S. Consumers' willingness to pay for green initiatives of the hotel industry. *Int. J. Hosp. Manag.* **2012**, *31*, 564–572. [[CrossRef](#)]
43. Dodds, R.; Graci, S.R.; Holmes, M. Does the tourist care? A comparison of tourists in Koh Phi Phi, Thailand and GiliTrawangan, Indonesia. *J. Sustain. Tour.* **2010**, *18*, 207–222. [[CrossRef](#)]
44. Kim, W.G.; Han, J.S.; Lee, E. Effects of relationship marketing on repeat purchase and Word of Mouth. *J. Hosp. Tour. Res.* **2001**, *25*, 272–288. [[CrossRef](#)]
45. Bonn, M.A.; Cronin, J.J., Jr.; Meehee, C. Do Environmental Sustainable Practices of Organic Wine Suppliers Affect Consumers' Behavioural Intentions? The Moderating Role of Trust. *Cornell Hosp. Q.* **2015**, *57*, 21–37. [[CrossRef](#)]
46. Żakowska-Biemans, S. Polish consumer food choices and beliefs about organic food. *Br. Food J.* **2011**, *113*, 122–137. [[CrossRef](#)]
47. Fotopoulos, C.; Krystallis, A. Purchasing motives and profile of the Greek organic consumer: A countrywide survey. *Br. Food J.* **2002**, *104*, 730–765. [[CrossRef](#)]
48. Steptoe, A.; Pollard, T.; Wardle, J. Development of a measure of the motives underlying the selection of food: The food choice questionnaire. *Appetite* **1995**, *25*, 267–284. [[CrossRef](#)] [[PubMed](#)]
49. Grunert, K.G.; Brunso, K.; Bisp, S. *Food-Related Life Style: Development of a Cross-Culturally Valid Instrument for Market Surveillance*; MAPP Working Paper N. 12; The Aarhus School of Business: Aarhus, Denmark, 1993.
50. Lockie, S.; Lyons, K.; Lawrence, G.; Grice, J. Choosing organics: A path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite* **2004**, *43*, 135–146. [[CrossRef](#)] [[PubMed](#)]
51. Krystallis, A.; Chrysosoidis, G. Consumers' willingness to pay for organic food: Factors that affect it and variation per organic product type. *Br. Food J.* **2005**, *107*, 320–343. [[CrossRef](#)]
52. Rossignoli, C.; Ricciardi, F.; Bonomi, S. Organizing for Commons-Enabling Decision-Making under Conflicting Institutional Logics in Social Entrepreneurship. *Group Decis. Negotiat.* **2018**, *27*, 417–443. [[CrossRef](#)]
53. Zeithaml, V.A.; Berry, L.L.; Parasuraman, A. The behavioural consequences of service quality. *J. Mark.* **1996**, *60*, 31–46. [[CrossRef](#)]
54. Hair, J.F.; Hult, G.T.M.; Ringle, C.M.; Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling*; Sage: Thousand Oaks, CA, USA, 2014.
55. Hair, J.F.; Sarstedt, M.; Ringle, C.M.; Mena, J.A. An assessment of the use of partial least squares structural equation modeling in marketing research. *J. Acad. Mark. Sci.* **2012**, *40*, 414–433. [[CrossRef](#)]
56. Podsakoff, P.M.; MacKenzie, S.B.; Lee, J.-Y.; Podsakoff, N.P. Common method biases in behavioural research: A critical review of the literature and recommended remedies. *J. Appl. Psychol.* **2003**, *88*, 879–890. [[CrossRef](#)] [[PubMed](#)]
57. Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E. *Multivariate Data Analysis: A Global Perspective*; Pearson: Upper Saddle River, NJ, USA, 2010.

58. Fornell, C.; Larcker, D.F. Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [[CrossRef](#)]
59. Miller, G.A. Consumerism in sustainable tourism: A survey of UK consumers. *J. Sustain. Tour.* **2003**, *11*, 17–39. [[CrossRef](#)]



© 2018 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

Nurturing tourists' consumption of green food: The persuasive strengths of different messages

Claudia Cozzio

Department of Economics and Management, University of Padova
Address: Via del Santo 33, 35123 Padova, Italy
Email: claudia.cozzio@phd.unipd.it

Dr Michael Volgger^{1,2}

¹School of Marketing (Tourism Research Cluster), Faculty of Business and Law, Curtin University,
Australia

²Catholic University of Eichstätt-Ingolstadt, Germany
Address: GPO Box U1987
6845 Perth, Western Australia, Australia
Email: michael.volgger@curtin.edu.au

Prof Ross Taplin

School of Accounting (Tourism Research Cluster), Faculty of Business and Law, Curtin University,
Australia

Address: GPO Box U1987
6845 Perth, Western Australia, Australia
Email: r.taplin@curtin.edu.au

Prof Arch G. Woodside

Yonsei University, Yonsei Frontier Lab
Address: 50 Yonsei-ro, Seodaemun-gu, Seoul 03722, Republic of Korea
Email: arch.woodside@bc.edu

Abstract

The roles of food in sustainable operations in hospitality are receiving increasing attention. At the same time, how hospitality providers can support the general trend towards “green” – organic, local and sustainable – food with persuasive messaging attached to their presentation of food on buffets (or menus) remains unclear. This paper presents rare research examining the effects of persuasion on actual behavior in a realistic hotel setting. The study reports on a field experiment comparing the effectiveness of informative appeals (local origin, organic production and sustainable/ethical production), experiential appeals and normative appeals on hotel guests’ food consumption. The findings show that experiential appeals using a combination of visual, emotional and participatory cues outperform informative and normative messages. This study advances research on persuasive communication for sustainability by emphasizing that “experiential” appeals are preferable over rational or normative appeals in experience-driven and hedonistic consumption settings such as food consumption on holidays.

Keywords: hospitality, tourism, sustainability, food, persuasion, health

1. INTRODUCTION

“Green food” is organic, local, and ethically produced food. Food is a relatively accessible vehicle for sustainability-orientated transformations of consumer behavior in tourism and hospitality contexts. This is because in the case of tourists’ food consumption, altruistic and egoistic consumer benefits are more closely aligned than with other tourism elements such as transportation or accommodation (see Hardeman et al., 2017). Accordingly, hospitality businesses including hotels are increasingly realizing that “greening” the food and beverage aspect can be an effective means to make environmental and social contributions and operate more responsibly (Wang et al., 2013). Using local, organically and ethically produced food, can ensure greener supply chains and reduce the carbon footprint through reduced transportation needs of supplied food, reduced application of pesticide and by supporting local and small-scaled agriculture. Against this background, backing growing consumer interest by further nurturing consumption of green foods in tourism contexts is a relevant issue.

Nevertheless, caution is necessary about directly generalizing an increase in declared interests in green food consumption at home or in restaurants (Lu & Gursoy, 2017) to tourism contexts. Existing research on sustainable consumer behavior in tourism, and beyond, consistently indicates a strong attitude-behavior gap (Auger & Devinney, 2007; Carrington et al., 2010; Gupta & Ogden, 2009). This gap supports the view that while evidence shows encouraging fractions of tourists declaring responsible attitudes such as support for sustainable practices at home, a preference for sustainable holiday options and a willingness to implement sustainable behavior while on holiday, consequent alteration of actual tourist behaviors does not seem to happen to a comparable degree (Juvan & Dolnicar, 2014). This attitude-behavior discrepancy may be due to the fact that tourism is perceived as being an exceptional situation, endowed with a “social license” to hedonistic behaviors seeking to experience happiness, enjoyment, and pleasure (Cohen et al., 2014; Gössling & Buckley, 2016; Miao & Wei, 2013) in a selfish manner (McKercher, 2015).

Whatever the reasons may be, the attitude-behavior discrepancy has at least two implications, one regarding content and one regarding methods. The first implication is that while sustainability mainstreaming may have been successful in changing what people feel is proper to say when publicly asked about their tourism behavior, there seems to still be substantial work to do when it comes to changing actual consumer behavior while on vacation. Smartly designed persuasive communication could be a suitable means to induce truly

behavioral shifts towards sustainability (Hardeman et al., 2017; Shahzalal & Font, 2018; Warren et al., 2017; Wehrli et al., 2017). The question however remains how to formulate such persuasive messages convincingly in order to result in the desired behavioral changes (see Font et al., 2017). While evidence indicates that informative, experiential or normative communications differ in their influence on consumer choice, it has not yet been thoroughly investigated how these appeals relate to the topic of tourists' sustainable food consumption. Food consumption is complex and combines emotional and rational as well individual and collective considerations in decision-making (White & Simpson, 2013).

In the specific context of tourists' food consumption an additional complexity occurs: both research and communication practice suffer from a lack of clarity about what is understood as "green food" and what drives its consumption (Jang et al., 2011; LaVecchia, 2008), usually treating organic, local and sustainable dimensions analogously. This lack in differentiation is not helpful in understanding how effective persuasive messages to consume more "green food" can be formulated as food consumption is linked to a varied set of motivations, including, pleasure, health and pro-environmental behavior (Lo et al., 2017). Therefore, first, this research aims to understand which dimensions of greenness (organic, local, sustainable) should be emphasized in persuasive communication aiming at making tourists' food consumption more sustainable. Second, this research also scrutinizes what type of persuasive communication (informative, experiential, normative) is most appropriate to nurture tourists' consumption of green food.

The second implication from the attitude-behavior gap questions the external validity of survey-based studies in understanding sustainable tourist behavior due to distortions caused by social desirability bias and calls for experiments and quasi-experiments as better approaches to generate tenable insights in this topic area (Woodside, 2010). Therefore, this research implements a field experiment of persuasive messages being exposed to tourists at an Italian hotel and measures their subsequent consumption of vegetables from the buffet. The study is among very few which study persuasion towards more sustainable (and healthy) food consumption in hotels in a realistic and behavioral orientated setting. The insights gained from comparing different persuasion approaches can help hotels to conceive persuasion and communication strategies that effectively support joint efforts of consumers and providers to more sustainable and responsible operations.

2. LITERATURE REVIEW

2.1. Persuasion for sustainable consumption in tourism

Tourism businesses that integrate sustainable practices often face challenges in effectively communicating their commitment to sustainability as well as the resulting customer benefits and to incentivize customers to collaborate to jointly obtain more sustainable results (Font et al., 2016; Hardeman et al., 2017; Villarino & Font, 2015). Some question the effectiveness of an overly pronounced focus on sustainability labelling and advertising (Parguel et al., 2011; Park & Millar, 2016). While recognizing it is challenging to encourage consumers to behave in a sustainable manner (Luchs et al., 2010), existing literature provides limited evidence and suggested alternatives regarding how tourism companies can influence their customers to consume more sustainably (Gössling & Buckley, 2016; Wehrli et al., 2014). However, hope in the potential of persuasive communication is growing among researchers (Shahzalal & Font, 2018; Xu & Jeong, 2019)

“Persuasion” is human communication designed to influence others by purposely modifying their attitudes and, more importantly, their behaviors (Bettinghaus & Cody, 1994; O’Keefe, 2002, 2016; Perloff, 2010). Thus, messages that encourage customers to change their behaviors are defined to be persuasive (Hardeman et al., 2017). Accordingly, how sustainability messages are written or displayed may encourage customers’ engagement in behaving more sustainably (Belz & Peattie, 2012; Gordon et al. 2011). Sustainability messages often have limited persuasiveness because knowledge is lacking on how to design them in a more influential way (Font et al., 2017).

Persuasive appeals are classifiable as cognitive or affective in nature (Becker, 1963; Fabrigar & Petty, 1999; Petty et al., 1991). Typically, cognitive appeals contain factual information such as product attributes or describe product benefits (Kotler & Armstrong, 1994), while affective appeals focus more on the emotions that consumers will experience through the consumption of a product or service (Bagozzi et al., 1999). In other words, the persuasiveness of cognitive appeals is based on a rational and logical information process (Bagozzi et al., 1999), whereas the persuasiveness of affective appeals is grounded in emotional and experiential consumer reactions (Richins, 1997). Although the effectiveness of cognitive versus affective appeal is still a matter of debate in the literature, it is generally accepted that the message appeal should fit with the product type (Johar & Sirgy, 1991; Shavitt, 1990, 1992). Thus, authors predict higher effectiveness by applying emotional appeals for emotionally chosen products and rational appeals for utilitarian products (O’Keefe, 2002; Wehrli et al., 2014; White & Simpson, 2013).

Against this background, persuasion attempts in tourism need to consider the hedonistic setting of tourism consumption, as people perceive holidays as socially legitimate opportunities for pursuing behaviors aimed at experiencing (exceptional) happiness and enjoyment (Cohen et al., 2014; Gössling & Buckley, 2016). Existing research provides some indications that tourists prefer emotional images and text over technical content in sustainable tourism messages (Wehrli et al., 2014; Zanon & Teichmann, 2016). Studies show that particularly affective appeals may succeed in promoting sustainable behavior in a tourism context, including increasing ethical behaviors towards paying visitor fees (Steckenreuter & Wolf, 2013), picking up litter (Brown et al., 2010), participating in hotel towel reuse (Goldstein et al., 2008), being involved in hotel energy and water saving practices (Warren et al., 2017), and making donations (Sgalitzer et al., 2016). However, major gaps still emerge in order to adequately explain which appeal is more effective in influencing consumer choice, especially in the hedonistic setting of food consumption while on vacation (Wehrli et al., 2017).

While affective and cognitive communications differ in their influence on consumer choice, how these appeals relate to the topic of tourists' sustainable food consumption has not been investigated yet. Food consumption intrinsically involves a mix of emotional and rational decision-making, and its perceived benefits can activate both the individual (i.e. benefits to the individual) and the collective (i.e. benefits to the society) identity levels (Hardeman et al., 2017; White & Simpson, 2013). Moreover, tourists' sustainable food consumption appears to be a complex process influenced by a range of factors including consumer attitudes, values, demographics, and the trustworthiness of the service provider (Becker-Olsen et al., 2006).

As sustainability information on food items is viewable as a credence attribute which is difficult to evaluate and verify directly by recipients, the trustworthiness of the message and its source play a paramount role (Lo et al., 2017). Moreover, as food consumption represents a routinized and partially unreflective process, external nudging interventions can be effective (Hall, 2013; Mont et al., 2014). All the more, it is surprising that there is a scarcity of research on the implementation of such nudging interventions in sustainable food consumption (Gössling et al., 2011).

By investigating the impact of persuasive messages on tourists' actual behavior, this study contributes in two ways to the underexplored area of green food consumption in tourism (Kim et al., 2017). The study explores effective appeals both in terms of content (what) and style (how). The topic of green food is relevant for implementing a sustainability approach in tourism and hospitality as Namkung and Jang (2013) unveil that

green practices that focus on foods (i.e., healthy and fresh menu choices, locally grown, organic, and sustainably produced foods) are more effective for enhancing a green brand image and behavioral intentions than adopting alternative focuses to sustainability.

2.2 Informative appeals to consume green food: Organic, local, ethical/sustainable

Green food and its promotion are characterized by a blurred understanding of what its main features are. Hence, three main dimensions of greenness can be distinguished (Jang et al., 2011; LaVecchia, 2008). The term “green food” may refer equally to (1) food from organic farming that avoids the use of synthetic pesticides and fertilizers (Hu et al., 2010); (2) food grown, produced, processed, and consumed within a particular nearby geographical area, reducing for example the pollution associated with transportation (Pizam, 2009) but also retaining freshness due to shorter stockage and transportation times as well as an association with specific terroirs and ecological systems; and (3) an ethical and sustainable food production that supports the long-term maintenance of ecosystems and local, traditional and/or extensive agricultural production (such as supporting local farmers) for future generations (Tilman & Clark, 2014). Specifically, the third dimension encompasses multiple components such as environmental sustainability (e.g. reduction of greenhouse gas emissions; Hu et al, 2010), economic sustainability (e.g. business, employment and trade opportunities for farmers; Naspetti & Zanolli, 2009), and social sustainability (e.g., support and empowerment of smaller rural communities; Nunkoo, 2017).

Consumers may attach varying importance to food greenness according to their gender (Robinson & Smith, 2002), lifestyle (Lockie et al., 2004; Fotopoulos & Krystallis, 2002), economic status (Krystallis & Chrysosoidis, 2005; Satia et al., 2005), and nationality (Wier et al., 2008; Zanolli & Naspetti, 2002). Besides differences in evaluating the importance of food greenness in general, two specific types of expected benefits of consuming green foods can be distinguished and may drive green food consumption differently: Consumers may choose green food for personal benefits (e.g. to prevent health problems) as well as for societal benefits (e.g., to increase long term maintenance of the ecosystem) (Lo et al., 2017; Shahzalal & Font, 2017; Uriely et al., 2007). In some contexts, personal benefits relate to the concept of food healthiness, that considers nutritional information, fresh and natural ingredients, weight control and a nutritionally balanced diet (Kim et al., 2013; Kral et al., 2002; Sun, 2013). Societal benefits are mostly associated with customer’s awareness of

the environmental, social, and economic impacts of their dining behaviors and food choices. Such awareness can translate to “the consumption of food with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations” (Burlingame & Dernini, 2010, p. 2286).

Overall, food greenness is likely to be a complex and blurred notion in consumers’ minds, as it is strongly connected to both personal care and social values which include but at the same time go beyond mere environmental protection, also focusing on the quality of life of local communities (Iraldo et al., 2017). Interplays between the “organic”, “local”, and “ethical/sustainable” dimensions of green food consumption are well-established (Iraldo et al., 2017), but make it more difficult to determine effective content for persuasive appeals. Having a clear messaging emphasizing relevant dimensions and benefits is however critical because it is more likely to generate consumers’ envisaged behavioral response (Xu & Jeong, 2019).

The strength of appeal content in terms of incentivizing green food consumption differs. For instance, appeals incorporating dimensions indicating personal rather than public benefits may be effective even among sustainability and environmentally conscious consumers. The observed *selfish altruism* (Miller, 2003) of tourism consumers emphasizes that they are often more inclined to purchase products that are of benefit to them *as well as* to the external environment, rather than products which are of benefit mainly to the rest of world.

Considering first of all objective, rational, and factual ways to communicate greenness dimensions in order to persuade more green food consumption among tourists, this study proposes the following hypothesis. H1: The effectiveness of informative persuasion of food being presented to tourists either as “organic”, “local”, or “ethical/sustainable” differs.

2.3 Experiential appeals

Many marketers view consumers as being concerned with achieving pleasurable experiences implemented through different tools such as communication, visual, and verbal identity (Schmitt, 1999). In this view, consumption experiences are often directed towards the pursuit of fantasies, feelings, and fun. In particular, emotional responses are conceptualized as relevant components of the experiential path to satisfaction (Schmitt, 1999). This is because it is assumed that reality is largely encoded in images and metaphors, and it is strongly related to the experience of affect (Epstein, 1994). For example, visual cues and

pictures which are able to evoke imagery processing of product consumption (Underwood et al., 2001), may generate more attention in advertising than purely text-based approaches (Schierl, 2001).

Existing research shows that affective, visual, and experience-related appeals will have the strongest impact on products with high experiential benefits. That is, products which provide sensory pleasure, variety, and cognitive stimulation during the consumption (Keller, 1993; Park et al., 1986; Wells et al., 2007). Additionally, Underwood et al. (2001) show that the positive effects of including a picture of the product on the package is more pronounced for products with relatively high levels of experiential benefits (e.g. candy) than for products with relatively low levels of experiential benefits (e.g., margarine). Researchers typically assess benefit type by product class membership (Underwood et al., 2001). For instance, sandwich bags are considered low in experiential benefits because their value lies primarily in a desired end state such as keeping food fresh, rather than the sensations that occur during consumption. On the other hand, the benefit of chocolate is highly experiential because directly derived from the enjoyment of the consumption process (Keller, 1993).

In sustainable tourism messaging, technical contents are found to be less appealing than emotional imagery and text (Wehrli et al., 2014, 2017), which emphasize the emotive aspects of the consumption (Cornelissen et al., 2007; Malone et al. 2014). In fact, affective appeals have a higher chance to grab the attention of the target and to trigger tourism behaviors that create favorable and more memorable thoughts (Bettinghaus & Cody, 1994). In addition, customers are more likely to respond positively to messages that refer to sustainability practices that they can experience through actively feeling the benefits of such practices (Cialdini & Goldstein, 2004; Kachel & Jennings, 2010). For example, Jameson & Brownell (2012) develop a practical tool for effective green communication in hotels based on creating and repeating a compelling story to encourage audience participation and minimize guests' efforts in understanding. Contextualization of messages and/or making them personal ensures perceived behavioral control, which improves customers' positive response (Stanford, 2014). In addition, real stories which involve guests' behavior in the message are likely to create an emotional response (Kotler & Lee, 2011).

As discussed, experiential communication appears to be particularly effective on products with high experiential benefits derived from the enjoyment of the consumption (Keller, 1993; Underwood et al., 2001; Wells et al., 2007). Prior studies on sustainable consumption in tourism have already provided some indication of the relative strength of emotional appeals over factual appeals (Hardeman et al., 2017). Food consumption

in a tourism context also falls under a product class with high experiential benefits. Hence, substantiating a persuasive sustainable food consumption message with pictures or real stories (Villarino & Font, 2015) may help generating a behavioral response among targeted tourists.

Against this background, the following hypothesis is proposed. H2: Experiential appeals for tourists' green food consumption are more persuasive than purely informative appeals.

2.4 Normative appeals

Social identity comprises two different components: one is the personal identity, related to a person's self, and the other one is the social identity, associated with the various identities of groups to which a person belongs (Tajfel, 2010). Personally and socially accepted norms facilitate behaviors that conform to the aforementioned identities (Bamberg & Schmidt, 2003). While personal norms refer to an individual's beliefs about their moral obligation to engage in a specific behavior (de Groot et al., 2013), social norms refer to “rules and standards that are understood by members of a group and that guide and/or constrain human behavior without the force of laws” (Sherif, 1936, p. 152).

Social norms emotionally and rationally affect people and increase the likelihood of being persuaded in their behaviors, as people are influenced by the behavior of others (Kalafatis et al., 1999). To encourage consumers to behave more sustainably, the mechanism of social norms can be utilized to create both injunctive appeals (i.e., highlighting what others think one should do) and descriptive appeals (i.e. highlighting what others are doing) (Hardeman et al., 2017). Normative communication, being either presented as injunctive or descriptive appeals, builds on a sense of and need for belonging and social acceptance (Han & Kim, 2010), by activating the collective self and social identity of individuals (Brewer & Gardner, 1996; Gardner et al., 1999).

This study focuses on descriptive social norms, defined as “beliefs about the actual behavior of others” (Schultz et al., 2008, p.6), as studies in various domains show that these norms can effectively trigger pro-environmental agency (Doran & Larsen, 2016; Han & Hwang, 2017). In fact, appeals employing descriptive norms prove to be superior to an appeal widely used by hotels (towel reuse) that focuses solely on environmental protection benefits (Goldstein et al., 2008). Moreover, the closer descriptive norms are to the individual's immediate situational circumstances (e.g. consider the appeal: “the majority of guests *in this room* reuse their towels”), the more persuasive power they prove to have (Goldstein et al., 2008). In addition to towel

reuse practices, previous research also highlights effectiveness of normative communication in eliciting sustainable hotel guests' behaviors in water conservation (Han & Hyun., 2018), in energy saving (Schultz et al., 2007), in the willingness to act pro-environmentally at tourist sites (Ong & Musa, 2011), in using local tour guides (Hardeman et al., 2017), and in choosing an eco-friendly hotel (Han et al., 2010). Thus, the following hypothesis is proposed. H3: Descriptive normative appeals for tourists' green food consumption are more persuasive than purely informative appeals.

3. METHOD

3.1 Research design, participants and stimuli

The study followed a between-group quasi experimental design and was carried out in a four stars holiday-hotel in the Southern Italian region of Apulia during the local summer season in 2018. The hotel offers 150 rooms and can host up to 540 guests at the same time. During the testing period an average of 361 guests [123; 497] stayed in the hotel every day (see Table 1). Guests were not informed about the field experiment. They were mostly domestic, Italian visitors ($\geq 96\%$) with an average of 15% repeat stays. The hotel's room rate includes full board and the length of stay is fixed at 7 days (one week), with almost all arrivals happening on Sundays.

Five experimental conditions (persuasive appeal: local, organic, sustainable/ethical, experiential, and normative) and a placebo condition (persuasive appeal: tastiness and freshness) were formulated as follows.

- Placebo: "Enjoy the tastiness and the freshness of our vegetables!"
- Local: "Our salad and our tomatoes are grown in a farm just a few meters far from here".
- Organic: "Our salad and our tomatoes grow up naturally without the use of pesticides".
- Sustainable: "Our company sustains the Apulian economy by buying salad and tomatoes cultivated by Apulian farmers"
- Experiential: "[Photo of a farm] Here is the place where our salad and tomatoes grow. Ask the reception to receive information about organizing a visit to the farm!"
- Normative: "Join your fellow guests in eating 'green' food: 75% of our guests eat our salad and our tomatoes because locally grown".

These six conditions were applied for 12 consecutive weeks from June 2018 to September 2018 with treatments changing weekly (on Sundays) and every treatment carried out in two (non-adjacent) weeks, and with varying order (order: placebo, LOC, ORG, SUST, EXP, NORM, LOC, EXP, NORM, ORG, SUST, placebo). However, data was taken daily which resulted in $n=84$ data points. Three of the five treatment conditions (local, organic, sustainable/ethical) are to be considered as variations of informative appeals. Three of the five treatment conditions are variations of the “local produce” message (one informative, one experiential, one normative). Assignment of participants to respective treatment or placebo groups was not random but depended on the week of their stay.

Guests were exposed to these treatment messages at the salad buffet during lunch. The salad buffet offers four options to hotel guests: tomato, salad, carrots, and cucumber. All six treatment messages (including the placebo group message) targeted tomatoes and salad and, in parallel, a constant placebo message (emphasizing the vegetables’ tastiness and freshness), was exposed for carrots and cucumber. Treatment messages were displayed in a clearly visible manner close to the respective vegetables and, additional to spatial closeness, referred to the vegetables in textual and pictorial manner. All messages were designed in a similar manner with the exception of the experiential message, which also included a photo of a nearby farm.

3.2 Measures and variables

To assess the impact of the different persuasive appeals on hotel guests, vegetables on the salad buffet were weighted before and after every lunch session. This enabled calculation of the daily consumption (per person) of salad and tomato (ST), and carrot and cucumber (CC). The primary dependent variable in this study, the difference $ST-CC$, captures the consumption of salad and tomato that is hypothesized to be influenced by the experimental treatments after controlling for the consumption of carrot and cucumber. The consumption of carrot and cucumber (CC), which throughout the whole experiment remained under the condition of the placebo message, was observed as a control variable to account for differences in overall consumption from the salad buffet (based for example on different tastes and eating habits of tourists or on varying other options available at lunch).

Several control variables that might be expected to influence salad buffet consumption were measured and included in calculations as well. The variable named *weekend* takes the value of 1 for measurements on

Saturday and Sunday and 0 otherwise. Controlling for weekends appeared justified as the change of visitor groups is happening on weekends and thus eating behaviour might be affected by differences in emotional status, rhythm and by the travel from/to home visitors undertake (which in turn may affect daily eating schedules). Analysis (not shown) confirmed no significant differences between Sundays and Saturdays, and hence these two days were combined to a “weekend” variable. The variable *children* was included to account for the percentage of visitors who are less than 18 years old and thus might affect the amount and type of vegetables eaten from the salad buffet (see Table 1). The data indicate a share of 73% adults on average [60%; 90%]. Group tourists might exhibit different behaviour than tourists travelling alone or in smaller groups. Therefore, *group* captured the proportion of people travelling in a tour group of 25 people or more. The share of group tourists was 10% on average [0%; 24%]. Finally, *skip* is an estimate of the percentage of visitors who skip lunch. This estimate was delivered by the hotel staff on a daily basis. The share of those skipping lunch was very low (on average 1%). All these control variables are measured daily to coincide with the daily measurement of the dependent variables; no consumption data on individual guests is available.

Table 1: Descriptive statistics (n = 84)

Variable	mean	st.dev.	min	max
ST [g]	24.8	4.8	14.6	35.7
CC [g]	8.8	2.1	4.3	15.9
Guests	361	113	123	497
Children	106	56	13	194
Group	38	23	0	75
Skip	3	4	0	15

3.3 Statistical Analysis

Regression analysis was performed in R (version 3.5.1) to investigate the effect of the five treatments (relative to the placebo group) on the primary dependent variable $ST-CC$, however analyses are also presented for the dependent variable ST (hence no control for the consumption of carrots and cucumber) and for completeness for the dependent variable CC . Five dummy variables are included in each regression to capture differences between each experimental treatment and the placebo. For example, the LOC dummy variable equals 1 if the local treatment was applied on that day and 0 otherwise. Similarly, dummy variables ORG,

SUST, EXP, and NORM are included for the other four treatment effects, together with the control variables described above.

Measured consumption are expected to be similar on consecutive days and on days close to each other in time because guests stay for more than one day (typically a week) and so the consumption pattern of a particular guest is captured over multiple consecutive days. The least squares regression assumption of independence is invalid for this data because measurements taken on consecutive days are taken on a group of people very similar to the previous day. Therefore, the generalized least squares (GLS) function was used to perform the regressions with auto-correlated residuals. A combination of autocorrelation and partial autocorrelation functions and statistical tests were used on auto-regressive moving average (ARMA) models for the correlated residuals and showed an AR(1) process was the most suitable. The regression equation for the primary dependent variable was therefore:

$$(ST - CC)_t = \beta_0 + \beta_1 LOC + \beta_2 ORG + \beta_3 SUS + \beta_4 EXP + \beta_5 NORM + \beta_6 weekend + \beta_7 children + \beta_8 group + \beta_9 skip + \varepsilon_t + \rho \varepsilon_{t-1}$$

where the subscript t refers to time (day; $t = 1, 2, \dots, 84$), ε_t is the error term for day t , and ρ is the parameter to capture autocorrelation between error terms.

4. RESULTS

Figure 1 shows the average consumption of ST and CC per person per lunch for days in each of the five experimental treatment groups. Average consumption in the placebo weeks appear with dotted/dashed lines. As expected, consumption of CC varies less between treatment weeks and is generally closer to the baseline (placebo) weeks. Table 2 provides regression results for the three dependent variables: averaged per person consumption of salad and tomato (ST), averaged per person consumption of carrot and cucumber (CC), and their difference ($ST-CC$). The different treatment conditions are included as independent variables: LOC referring to the local persuasive appeal, ORG referring to the organic persuasive appeal, SUS referring to the sustainable/ethical appeal, EXP referring to the experiential appeal, and $NORM$ referring to the normative

persuasive appeal. Table 2 also shows results for a number of control variables (i.e., *weekend*, *children*, *group*, and *skip*).

Figure 1: Average consumption of ST and CC per lunch per person [g]

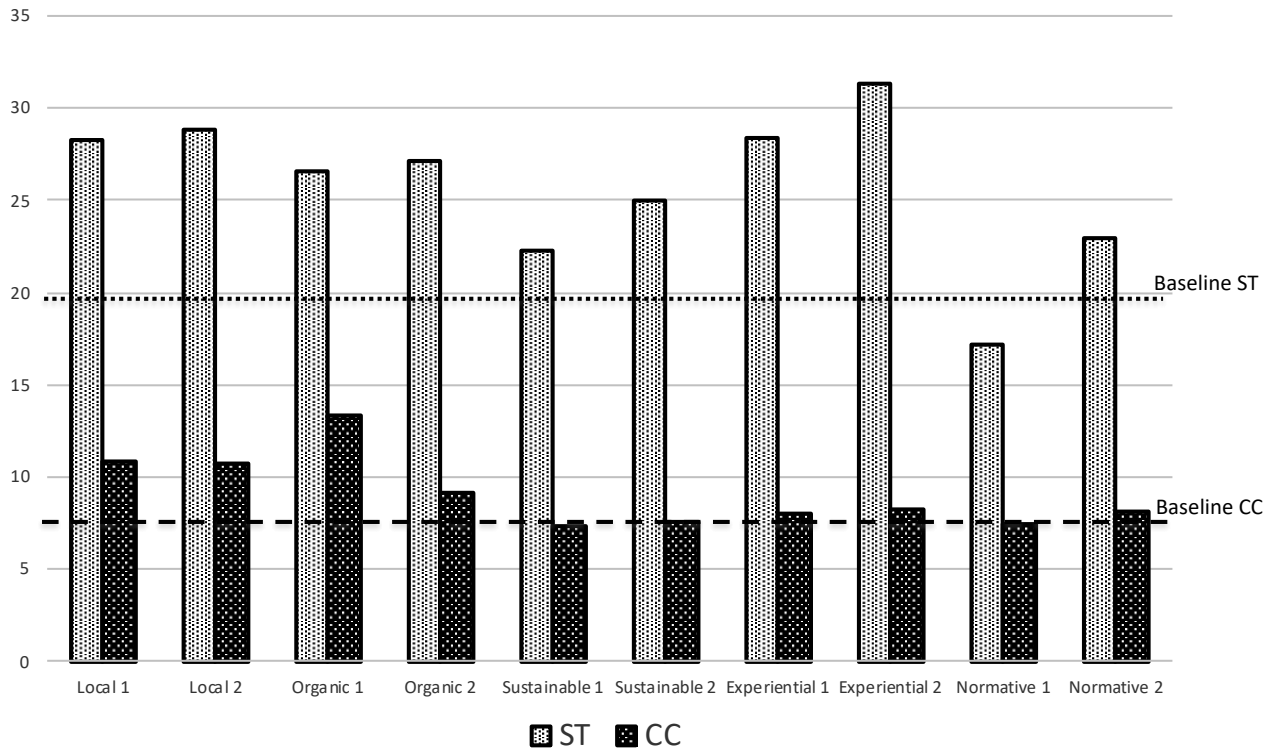


Table 2: Regression analysis of ST, CC and the difference ST-CC consumption (including autocorrelation of residuals)

	ST-CC				ST				CC			
	Coef	SE	t	p	Coef	SE	t	p	Coef	SE	t	p
<i>LOC</i>	5.225	1.992	2.623	0.011	8.204	1.855	4.423	0.000	3.647	0.910	4.009	0.000
<i>ORG</i>	4.668	2.242	2.082	0.041	7.541	2.133	3.536	0.001	3.604	1.042	3.458	0.001
<i>SUS</i>	4.683	1.949	2.403	0.019	4.911	1.848	2.658	0.010	0.416	0.903	0.461	0.646
<i>EXP</i>	12.34	2.791	4.424	0.000	12.29	2.612	4.705	0.000	0.221	1.280	0.173	0.863
<i>NORM</i>	1.837	2.614	0.703	0.484	1.711	2.461	0.695	0.489	0.421	1.205	0.350	0.728
weekend	1.899	0.717	2.648	0.010	1.334	0.624	2.138	0.036	-	0.309	-	0.092
children	-	0.181	-	0.035	-	0.178	-	0.170	0.129	0.087	1.491	0.140
group	-	0.115	-	0.016	-	0.117	-	0.222	0.133	0.057	2.355	0.021
skip	-	0.296	-	0.052	-	0.256	-	0.021	0.003	0.127	0.022	0.983
rho	0.444			0.000	0.534			0.000	0.520			0.000

The three informative appeals emphasizing different features of green foods, that is the local (*LOC*), organic (*ORG*), and sustainable/ethical (*SUS*) appeals, all had notable effects on *ST-CC* with p-values smaller than 0.05 (Table 2). Note that the local and organic appeals had very substantial effects on *ST* consumption, however they also had some effect on *CC* consumption indicating a potential spill-over influence of appeals across vegetables.

As the rho-values in Table 2 indicate, a significant correlation in consumption from one day to the next occurs. The expected residual on a random day is approximately 50% of the size of the residual on the previous day. This association is most likely explained by the fact that it is almost the same people eating from the buffet on consecutive days. With respect to the control variables, consumption of salad and tomato (*ST*) is higher on the weekends, and consumption of carrot and cucumber (*CC*) is lower. This may be due to guests preparing lunch packages (e.g. sandwiches) for their home travels. The difference in consumption between salad/tomato and carrot/cucumber (*ST-CC*) decreases with an increased proportion of children. This is due to slight decreases in the consumption of salad and tomato (*ST*) and increases in the consumption of carrot and cucumber (*CC*) with more children present. The same is true for days with higher shares of group visitors.

To more easily compare the treatment effects in Table 2, the differences between pairs of the experimental treatments appear in Table 3 (Table 2 shows them relative to the placebo). Table 3 shows the effect of the row treatment relative to the column treatment (with standard errors in parentheses). For example, the experiential appeal (*EXP*) produced a higher value of *ST-CC* compared to the local origin informative treatment (*LOC*) by 7.12 ($p < .001$). Indeed, the experiential treatment produced a significantly higher effect than all the other treatments. Moreover, *NORM* was slightly lower than *LOC* and *ORG* ($p < .1$). All other differences exhibit p-values above .1. From Table 2, the large effect of the experiential treatment is influencing the *ST* consumption and not the *CC* consumption.

Based on the findings in Table 3, H1 that posits different effects between *LOC*, *ORG*, and *SUS* does not receive support. H2 that posits the superiority of experiential appeals (*EXP*) relative to informative appeals (*LOC*, *ORG*, *SUS*) does receive support. H3 that posits the superiority of descriptive-normative appeals (*NORM*) relative to informative appeals (*LOC*, *ORG*, *SUS*) does not receive support.

Table 3: Estimated difference in treatment effects (row treatment – column treatment) on ST-CC consumption (with standard errors).

	LOC	ORG	SUS	EXP	NORM
<i>LOC</i>		0.557 (1.700)	0.542 (1.701)	-7.12 (1.952)***	3.38 (1.833)*
<i>ORG</i>	-0.557 (1.700)		-0.015 (1.741)	-7.679 (1.797)***	2.831 (1.675)*
<i>SUS</i>	-0.542 (1.701)	0.015 (1.741)		-7.664 (2.114)***	2.846 (1.990)
<i>EXP</i>	7.12 (1.952) ***	7.679 (1.797)***	7.664 (2.114)***		1.837 (2.614)
<i>NORM</i>	-3.38 (1.833)*	-2.831 (1.675)*	-2.846 (1.990)	-1.837 (2.614)	

* $p < .1$; *** $p < .001$

An alternative case-based analysis of the data (fuzzy set Qualitative Comparative Analysis, fsQCA) (Ragin, 2008; Tóth et al., 2015; Woodside, 2014) is presented in Appendix 1 and leads to similar results, confirming the strength of the experiential appeal to induce high consumption of *ST-CC* and suggesting a role for informative appeals in avoiding particularly low levels of *ST-CC*.

5. DISCUSSION

5.1. *The impact of persuasive communication in terms of content*

The informative appeals applied to green food which was presented to tourists either as “organic”, “local”, or “ethical/sustainable” all unveiled substantial effects on consumption. The study confirms a general effect of informative green food appeals on hotel consumers and highlights the impact of cognitive and rational persuasive communication in supporting green food consumption among tourists. However, the particular effects between “organic”, “local”, and “ethical/sustainable” appeals did not appear greatly different. Although a tendency is observable for the local origin appeal to be slightly more effective in persuading hotel tourists to eat green foods than the organic and ethical/sustainable appeals, overall findings are not conclusive enough to maintain H1.

Despite this general assessment, a few qualifications are warranted. Green food choice involves a mix of perceived benefits regarding both the individual and the collective levels (i.e., benefits to the society/environment) (Hardeman et al, 2017; White & Simpson, 2013). Reading all obtained findings in conjunction and despite the lack of consistently statistically significant p-values, with a good degree of caution

one may argue that the “local” appeal shows signs of exhibiting a slightly stronger persuasive effect on consumption than the “ethical/sustainable” appeal. This result provides some indication that internal antecedents in tourists’ food choice associating with personal health and taste (i.e., “local”) (Namkung & Jang, 2007) may have a more powerful effect compared to external antecedents such as the awareness of beneficial societal implications of food service provision (i.e., “ethical/sustainable”) (Jones et al., 2011). This perspective supports the claim that consumers pay increasingly more attention to personal health considerations in the food choice scenario (Baiomy et al., 2019; Hwang & Lorenzen, 2008). This perspective may also support notions of tourism being a context of hedonistic or selfish altruism where individual pleasure- and benefit-seeking is an important trigger for responsible choices (Malone et al., 2014; Miller, 2003).

In addition, this study reveals that the “local” and “organic” appeals apparently also increased consumption of vegetables to which they had not been applied (*CC*), indicating a spill-over effect. It seems that both the treatments contributed in creating a generalized sense of healthiness and tastiness applicable to all the vegetables proposed in the buffet. This observation supports the existence of an effect of these appeals which unfolds perhaps in an undifferentiated manner.

5.2. The impact of persuasive communication in terms of style

The “local” treatment was proposed to hotel guests in three variations (informative, experiential, and normative) to explore the effectiveness of different types of persuasive communication in terms of style (how). The “experiential” treatment showed by far the largest effect on consumption both of *treated* vegetables ($\beta=12.29$) and of the difference between *treated* and *non-treated* vegetables ($\beta= 12.34$). A direct comparison between treatments (see Table 3) also clearly highlights the superiority of experiential appeals over informative ones. These findings confirm that emotional appeals are suited best to persuade tourists to more responsible behavior in food consumption (in a tourism context) and more generally supports the idea of a fit between appeal and product class leading to persuasive effectiveness (Underwood et al., 2001; Wells et al., 2007). Hence H2 receives support.

As the visual design aspect of the service experience receives increasing attention in marketing research (Hagtvedt & Brasel, 2017; Hwang et al., 2018; Liu et al., 2018; Wansink & Love, 2014), this study, focusing on a product class with high experiential benefits (i.e. food in tourism), also confirms the importance

of visual cues in emphasizing emotive aspects of consumption (Cornelissen et al., 2007; Malone et al., 2014) and in generating a behavioral response among target tourists.

Contrary to the results in the case of informative appeals, the impact of the “experiential” treatment emerged as the strongest on the *treated* vegetables consumption, while no substantial effects are discovered in the consumption of the *non-treated* vegetables. A possible explanation for this strongly differentiating effect is that experiential appeals are idiosyncratically linked to the product endorsed (Wehrli et al., 2014, 2017). As discussed, an informative/rational way to communicate greenness appears to be generalized to the whole buffet.

The “normative” treatment displayed relatively weak effects on the consumption of all the vegetables proposed in the buffet. Hence H3 does not receive support. Unlike prior findings in other areas (Goldstein et al., 2008; Han & Hyun, 2018; Hardeman et al., 2017), this study discloses that, in the food environment, normative communication in the form of descriptive appeals (pointing to others’ behavior) has a less powerful effect in eliciting the envisaged “green” behaviors. Two explanations can potentially clarify the results.

First, green food choice decisions are complex (Auty, 1992; Kivela et al., 1999a, 2000; Park, 2004; Sobal & Bisogni, 2009), as they are personal, emotional, situational, and dynamic (Sobal et al., 2014). “Normative” appeals seem to work well in contexts that request an active involvement of the recipients as a concrete signal of being part of a sustainable community (e.g., water conservation, energy saving, towel changing program), while it does not seem to have enough power to overcome the complexity of motivations related to food choices.

Second, as information on food items are definable as credence attributes difficult to evaluate and directly verify by the recipients, the perceived trustworthiness of the source plays a paramount role (Lo et al., 2017). Interestingly, a food recommendation endorsement by a celebrity generates more pleasure and arousal than an endorsement by food experts (Kusumasondjaja & Tjiptono, 2019). Following this stream of research, the present study may provide some indication that peer hotel guests are not considered as a sufficiently trustable source in the context of the complex field of food consumption to elicit behavioral response.

6. CONCLUSION

6.1. Theoretical implications

This research makes several theoretical implications. First, the study here adds to the services management literature in the area of sustainable/responsible consumption by shedding light on consumers' behavioral responses using a field experiment in a hotel with naturally occurring clients. By applying an unobtrusive field experiment, the often-observed attitude-behavior gap in sustainability-orientated consumer behavior is accounted for (Juvan & Dolnicar, 2014). Through investigating the impact of different persuasive messages on tourists' food consumption behavior, this study contributes to the underexplored topic of green food consumption in tourism (Kim et al., 2017), exploring the effectiveness of persuasive appeals of messages both in terms of content (what) and style (how). It thereby adds to recent hopes voiced with respect to the potential of persuasive consumption to contribute in greening the tourism and hospitality sectors (Hardeman et al., 2017; Shahzalal & Font, 2018; Warren et al., 2017; Wehrli et al., 2017). According to the obtained results from the experiment, persuasion for green food consumption seems to be possible: First, informative/cognitive appeals show to be effective, but what *specific* informative appeal (i.e., “organic”, “local”, or “ethical/sustainable” emphasis) is selected seems to be less relevant (with some indications that local origin may be more effective than an ethics/sustainability appeal). Second, *how* an appeal to consume more green food is communicated appears important as “experiential” appeals show greater persuasive effectiveness than “informative” and, in particular, “normative” appeals.

Second, these results enrich the literature on the hospitality industry, healthy dining, and menu psychology (Berry et al., 2018; Gao & Mattila, 2017; Hsiao et al., 2016; Jang & Namkung, 2009), and they address the call for novel marketing strategies that bolster persuasion effects (Jiang et al., 2015). In fact, prior findings appear conflicting: Some research unveil the benefits of using health and nutrition claims in restaurant menus (Kozup et al., 2003; Lu & Gursoy, 2017), while others emphasize drawbacks of healthy labeling strategies (Finkelstein & Fishbach, 2010; Wansink & Chandon, 2006; Wilcox et al., 2009).

Third, this study extends research on persuasive communication by emphasizing that “experiential” appeals combined with visual cues are preferable over purely informative appeals in experience-driven and hedonistic consumption settings such as food consumption on holidays. These findings feed a recent stream of literature focused on the importance of visual design aspects in the service industry (Fuchs et al., 2015; Liu et al., 2019). For instance, Liu et al. (2019) show that handwritten typeface in menus induces a sense of human touch that triggers the perception that care and love are symbolically imbued in the restaurant's offerings.

Similarly, in the conducted experiment the displaying of the picture of the field and farm where the vegetables are grown may instill the same sense of love able to persuade tourists. In that way, effort and passion for creating a food offering in the best benefit of customers are successfully communicated to guests. Moreover, the ability to visit the farm where vegetables are grown is likely to increase the trustworthiness of the message and the perceived behavioral control (Stanford, 2014). Transferring a mere message into a promise of a potential experience which can be perceived with all senses (such as a visit to a farm), means giving guests the opportunity to play an active role through participation (Cialdini & Goldstein, 2004; Jameson & Brownell, 2012; Kachel & Jennings, 2010; Stanford, 2014). Whether or not this experience is realized appears secondary.

Fourth, as food consumption represents a routinized and partially unreflective process, this study corroborates that external nudging interventions can be particularly effective (Hall, 2013; Mont et al., 2014). Generally, the findings provide support for the emerging trend of nudging as an approach to promoting green food choices (Bergeron et al., 2019; Jeong et al., 2019; Krešić et al., 2019). Nudging involves the subtle re-arrangement of the food environment to implicitly guide food choices and eating behavior (Thaler & Sunstein, 2008). Hence, this study emphasizes the fact that nudging through green food cueing may be a promising avenue for promoting healthier and more sustainable choices (Tonkin et al., 2019). This research also helps in enriching the hospitality and marketing research with regard to useful green food communication strategies.

Fifth, to the best of the authors' knowledge this study represents the first attempt to apply normative communication appeals in the context of green food with findings indicating its limited effectiveness. These results contribute in furthering the context-dependent understanding about this particular type of communication which has successfully been applied to other sustainable initiatives in the hospitality context (e.g. water conservation, see Han & Hyun, 2018; energy saving, see Schultz et al., 2007). It also emphasizes the necessity to deeply investigate the role those who endorse a message play (Kusumasondjaja & Tjiptono, 2019).

6.2. Managerial implications

Given that hotel and restaurant managers informing their customers regarding their green efforts in marketing communications is becoming increasingly important (Xu & Jeong, 2019), the findings of the present study provide useful operational directions and guidelines for hotel and restaurant practitioners willing to

promote green food consumption effectively. In fact, the findings can directly inspire strategies about formulating effective persuasive appeals in a real-world eating environment. Promoting the selection of green foods on buffets (or, presumably, menus) by pointing at their “local origin”, “organic production”, or “ethical/sustainable production” messages can be equally effective. Managers should notice that framing these messages in an “experiential” style with visual cues, emotional language, and foreshadowed participation opportunities is likely to be more persuasive than purely informative or normative messages when promoting green food offerings.

As food consumption represents a routinized and partially unreflective process (Hall, 2013; Mont et al., 2014), communicating its features in a way that reaches consumers at the emotional level may be effective. Practitioners should evoke human associations and perceptions that the food offering is full of love and passion. Thus, hotel and restaurant managers should use emotional messages that include photos, evoke stories, and directly address tourists’ emotions if they intend to communicate effectively their commitment toward green food. Keywords and associations included in the messages should imply food being locally, organically, and socially sustainably produced (ordered in decreasing likelihood of impact).

6.3. Limitations and Future research

This study presents a number of limitations. First, the study focuses on a single hotel. This study should be repeated across a range of hotels (i.e., hotels with different quality and price levels, in different locations), further increasing the variability of the guest mix and of buffet characteristics. In addition, future studies should include other cultures for further comparisons since the study has a marked Italian perspective (with almost exclusively Italian hotel guests). Food has a distinctive and important role in Italian culture and Italians may tend to have a particularly high regard of food’s Italian (local) origin and production. Hence, caution is required with any generalizations to other cultures.

Second, the “experiential” and the “normative” treatments were applied only to the “local” dimension. Testing these treatments also on the “organic” and the “ethical/sustainable” dimensions would be a valuable attempt to further the understanding on their persuasiveness.

Third, this study did not investigate the personal traits which can potentially influence the individual perceptions of the presented persuasive messages. Especially, concerning the effectiveness of the “normative”

treatment, future research could consider the consumer's need for uniqueness scale (CNFU scale) (Ruvio & Shoham, 2007), which posits that in a social context an individual can be categorized along a dimension of social inclusiveness-distinctiveness.

Fourth, this study did not consider the tourists' eating attitudes that can potentially have an impact on the persuasive strength of different messages (Tonkin et al., 2019). Future research should analyze from a tourists' perspective the presence of various motives which can be health related, diet related, and sustainability related or hedonically driven. Endorsement of food recommendations (Kusumasondjaja & Tjiptono, 2019) and measuring their respective persuasive strength represents a valuable stream for future research.

APPENDIX

Appendix 1: Analysis of sufficient conditions for consuming high and low amounts of ST-CC calculated on weekly data (fsQCA Truth Table analysis, fsQCA 3.1b, Quine-McCluskey Algorithm)

Conditions	Outcome: High amount of Term1	Outcome: Low amount of Term 2
LOC		×
ORG		×
SUST		×
EXP	•	×
SOC		
Consistency	1.00	0.84
Raw coverage	0.33	0.56
Unique coverage	0.33	0.56
Solution consistency	1.00	0.84
Solution coverage	0.33	0.56

Notes: (1) (st-cc) = f(loc, org, sust, exp, soc) // (2) ~(st-cc) = f(loc, org, sust, exp, soc). Black dots (•) indicate the presence of a condition; a cross (x) indicates their negation. Values for ST-CC calibrated using min, mean-sd, mean+sd, max on daily data avoiding mechanistic application. Intermediate solutions include assumptions about easy counterfactuals. Cut-off consistency set at 0.8. Intermediate solutions are shown. Assumptions for intermediate solutions: (1) (st-cc): loc (present), org (present), sust (present), exp (present), soc (present); (2) ~(st-cc): loc (absent), org (absent), sust (absent), exp (present), soc (absent). This presentation of data is inspired by Tóth et al. (2015).

REFERENCES

- Auger, P., & Devinney, T.M. (2007). Does what consumers say matter? The misalignment of preferences with unconstrained ethical intentions. *Journal of Business Ethics*, 76, 361-383.
- Auty, S. (1992). Consumer choice and segmentation in the restaurant industry. *Service Industries Journal*, 12(3), 324-339
- Baiomy, A.E., Jones, E., & Goode, M.M.H. (2019). The influence of menu design, menu item descriptions and menu variety on customer satisfaction. A case study of Egypt. *Tourism and Hospitality Research*, 19(2), 213-224.
- Bagozzi, R.P., Gopinath, M., & Nyer, P.U. (1999). The role of emotions in marketing. *Journal of the Academy of Marketing Science*, 27(184), 184-206.
- Bamberg, S., & Schmidt, P. (2003). Incentives, morality, or habit? Predicting students' car use for university routes with the models of Ajzen, Schwartz, and Triandis. *Environment and Behavior*, 35(2), 264-285.
- Becker, S. L. (1963). Research on emotional and logical proofs. *Southern Speech Journal*, 28, 198-207.
- Becker-Olsen, K.L., Cudmore, B.A., & Hill, R.P. (2006). The impact of perceived corporate social responsibility on consumer behavior. *Journal of Business Research*, 59, 46-53.
- Belz, F.M., & Peattie, K. (2012). *Sustainability marketing: a global perspective*. Chichester: John Wiley and Sons.
- Bergeron, S., Doyon, M., Saulais, L., & Labrecque, J. (2019). Using insights from behavioral economics to nudge individuals towards healthier choices when eating out: A restaurant experiment. *Food Quality and Preference*, 73, 56-64.
- Berry, C., Burton, S., & Howlett, E. (2018). The effects of voluntary versus mandatory menu calorie labeling on consumers' retailer-related responses. *Journal of Retailing*, 94(1), 73-88.
- Bettinghaus, E.P., & Cody, M.J. (1994). *Persuasive communication*. New York: Holt Rinehart and Wistor.
- Brewer, M. B., & Gardner, W. (1996). Who is this " We"? Levels of collective identity and self representations. *Journal of personality and social psychology*, 71(1), 83-93.
- Brown, T. J., Ham, S. H., & Hughes, M. (2010). Picking up litter: An application of theory based communication to influence tourist behaviour in protected areas. *Journal of Sustainable Tourism*, 18, 879-900.
- Burlingame, B., & Dernini, S. (2010). *Sustainable diets and biodiversity. Direction and solutions for policy, research and action*. In *Proceedings of the International Scientific Symposium Biodiversity and Sustainable Diets United Against Hunger, Rome, Italy, 3-5 November 2010*; FAO Headquarter: Rome, Italy, 2010.
- Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers. *Journal of Business Ethics*, 97(1), 139-158.
- Cialdini, R.B., & Goldstein, N.J. (2004). Social influence: Compliance and conformity. *Annual Review Psychology*, 55, 591-621.
- Cohen, S., Higham, J., Peeters, P., & Gössling, S. (2014). *Understanding and governing sustainable tourism mobility: Psychological and behavioural approaches*. London: Routledge.
- Cornelissen, J. P., Haslam, S. A., & Balmer, J. M. (2007). Social identity, organizational identity and corporate identity: Towards an integrated understanding of processes, patternings and products. *British Journal of Management*, 18, S1-S16.
- De Groot, J.I., Abrahamse, W., & Jones, K. (2013). Persuasive normative messages: The influence of injunctive and personal norms on using free plastic bags. *Sustainability*, 5, 1829-1844.
- Doran, R., & Larsen, S. (2016). The relative importance of social and personal norms in explaining intentions to choose eco-friendly travel options. *International Journal of Tourism Research*, 18, 159-166.
- Epstein, S. (1994). Integration of the Cognitive and the Psychodynamic Unconscious. *American Psychologist*, 49(8), 409-424.
- Fabrigar, L.R., & Petty, R.E. (1999). The role of the affective and cognitive bases of attitudes in susceptibility to affectively and cognitively based persuasion. *Personality and Social Psychology Bulletin*, 25(3), 363-381.

- Finkelstein, S. R., & Fishbach, A. (2010). When healthy food makes you hungry. *Journal of Consumer Research*, 37(3), 357-367.
- Font, X., Elgammal, I., & Lamond, I. (2017). Greenhushing: the deliberate under communicating of sustainability practices by tourism businesses. *Journal of Sustainable Tourism*, 25(7), 1007-1023,
- Font, X., Garay, L., & Jones, S. (2016). A social cognitive theory of sustainability empathy. *Annals of Tourism Research*, 58, 65-80.
- Fotopoulos, C., & Krystallis, A. (2002). Purchasing motives and profile of the Greek organic consumer: A countrywide survey. *British Food Journal*, 104, 730-765.
- Fuchs, C., Schreier, M., & Van Osselaer, S. M. (2015). The handmade effect: What's love got to do with it? *Journal of Marketing*, 79(2), 98-110.
- Gao, Y. L., & Mattila, A. S. (2017). The impact of stereotyping on consumers' food choices. *Journal of Business Research*, 81, 80-85.
- Gardner, W. L., Gabriel, S., & Lee, A. Y. (1999). "I" value freedom, but "we" value relationships: Self-construal priming mirrors cultural differences in judgment. *Psychological Science*, 10, 321-32.
- Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research*, 35(3), 472-482.
- Gordon, R., Carrigan, M., & Hastings, G. (2011). A framework for sustainable marketing. *Marketing Theory*, 11, 143-163.
- Gössling, S., & Buckley, R. (2016). Carbon labels in tourism: Persuasive communication? *Journal of Cleaner Production*, 111(B), 358-369.
- Gössling, S., Garrod, B., Aall, C., Hille, J., & Peeters, P. (2011). Food management in tourism: Reducing tourism's carbon 'foodprint'. *Tourism Management*, 32(3), 534-543.
- Gupta, S., & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. *Journal of Consumer Marketing*, 26(6), 376-391.
- Hagtvedt, H., & Brasel, S.H., (2017). Color saturation increases perceived product size. *Journal of Consumer Research*, 44(2), 396-413.
- Hall, C.M. (2013). Framing behavioural approaches to understanding and governing sustainable tourism consumption: beyond neoliberalism, 'nudging' and 'green growth'? *Journal of Sustainable Tourism*, 21, 1091-1109.
- Han, H., & Hyun, S.S. (2018). What influences water conservation and towel reuse practices of hotel guests? *Tourism Management*, 64, 87-97
- Han, H., & Hwang, J. (2017). What motivates delegates' conservation behaviors while attending a convention? *Journal of Travel and Tourism Marketing*, 34, 82-98.
- Han, H., Hsu, L., & Sheu, C. (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmentally friendly activities. *Tourism Management*, 31, 325-334.
- Hardeman, G., Font, X., & Nawijinc, J. (2017). The power of persuasive communication to influence sustainable holiday choices: Appealing to self-benefits and norms. *Tourism Management*, 59, 484-493.
- Hsiao, Y. H., Chen, L. F., Chang, C. C., & Chiu, F. H. (2016). Configurational path to customer satisfaction and stickiness for a restaurant chain using fuzzy set qualitative comparative analysis. *Journal of Business Research*, 69(8), 2939-2949.
- Hu, H., Parsa, H.G., & Self, J. (2010). The dynamics of green restaurant patronage. *Cornell Hospitality Quarterly*, 51(3), 344-362.
- Hwang, Y., Shin, J., & Mattila, A. S. (2018). So private, yet so public: The impact of spatial distance, other diners, and power on solo dining experiences. *Journal of Business Research*, 92, 36-47.
- Hwang, J., & Lorenzen, C.L. (2008). Effective nutrition labeling of restaurant menu and pricing of healthy menu. *Journal of Foodservice*, 19(5), 270-276.

- Iraldo, F., Testa, F., Lanzini, P., & Battaglia, M. (2017). Greening competitiveness for hotels and restaurants. *Journal of Small Business and Enterprise Development*, <https://doi.org/10.1108/JSBED-12-2016-0211>
- Jameson, D.A., & Brownell, J. (2012). Telling your hotel's "green" story: Developing an effective communication strategy to convey environmental values. *Cornell Hospitality Tools* 3.
- Jang, Y.J., Kim, W.G., & Bonn, M.A. (2011). Generation Y consumers' selection attributes and behavioural intentions concerning green restaurants International. *Journal of Hospitality Management*, 30, 803–811.
- Jang, S. S., & Namkung, Y. (2009). Perceived quality, emotions, and behavioral intentions: Application of an extended Mehrabian–Russell model to restaurants. *Journal of Business Research*, 62(4), 451-460.
- Jeong, E., Jang, S., Behnke, C., Anderson, J., & Day, J. (2019). A scale for restaurant customers' healthy menu choices: individual and environmental factors. *International Journal of Contemporary Hospitality Management*, 31(1), 217-246.
- Jiang, Y., Gorn, G. J., Galli, M., & Chattopadhyay, A. (2015). Does your company have the right logo? How and why circular- and angular-logo shapes influence brand attribute judgments. *Journal of Consumer Research*, 42(5), 709-726.
- Johar, J. S., & Sirgy, M. J. (1991). Value-expressive versus utilitarian advertising appeals. *Journal of Advertising*, 20, 23–33.
- Jones, P., Hillier, D., & Comfort, D. (2011). Shopping for tomorrow: promoting sustainable consumption within food stores. *British Food Journal*, 113(7), 935-948.
- Juvan, E., & Dolnicar, S. (2014). The attitude–behaviour gap in sustainable tourism. *Annals of Tourism Research*, 48, 76-95.
- Kachel, U., & Jennings, G. (2010). Exploring tourists' environmental learning, values and travel experiences in relation to climate change: A postmodern constructivist research agenda. *Tourism and Hospitality Research*, 10(2), 130–140. <https://doi.org/10.1057/thr.2009.34>
- Kalafatis, S.P., Pallard, M., & Markos, R.E. (1999). Green marketing and Ajzen's theory of planned behaviour: A cross-market examination. *Journal of Consumer Marketing*, 16, 441–460.
- Keller, K.L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1-22.
- Kim, S., Lee, K., & Fairhurst, A. (2017). The review of *green* research in hospitality, 2000-2014: Current trends and future research directions. *International Journal of Contemporary Hospitality Management*, 29(1), 226-247.
- Kim, H.J., Park, J., Kim, M.J. & Ryu, K. (2013). Does perceived restaurant food healthiness matter? Its influence on value, satisfaction and revisit intentions in restaurant operations in South Korea. *International Journal of Hospitality Management*, 33(1), 397-405.
- Kivela, J., Inbakaran, R., & Reece, J., (2000). Consumer research in the restaurant environment. Part 3: analysis, findings and conclusions. *International Journal of Contemporary Hospitality Management*, 12(1), 13–31.
- Kivela, J., Inbakaran, R., & Reece, J. (1999a). Consumer research in the restaurant environment. Part 1: a conceptual model of dining satisfaction and return patronage. *International Journal of Contemporary Hospitality Management*, 11(5), 205–222.
- Kotler, P., & Lee, N.R. (2011). *Social marketing: Influencing behaviors for good*. Thousand Oaks: Sage.
- Kotler, P., & Armstrong, G. (1994). *Principles of marketing*. Englewood Cliffs: Prentice Hall.
- Kozup, J. C., Creyer, E. H., & Burton, S. (2003). Making healthful food choices: the influence of health claims and nutrition information on consumers' evaluations of packaged food products and restaurant menu items. *Journal of Marketing*, 67(2), 19-34.
- Kral, T.V.E., Roe, L.S., & Rolls, B.J. (2002). Does nutrition information about the energy density of meals affect food intake in normal-weight women?. *Appetite*, 39(2), 137-145.
- Krešić, G., Liović, N., & Pleadin, J. (2019). Effects of menu labelling on students' food choice: a preliminary study. *British Food Journal*, 121(2), 479-491.
- Krystallis, A., & Chrysosoidis, G. (2005). Consumers' willingness to pay for organic food: Factors that affect it and variation per organic product type. *British Food Journal*, 107, 320–343.

- Kusumasondjaja, S., & Tjiptono, F. (2019). Endorsement and visual complexity in food advertising on Instagram. *Internet Research*. <https://doi.org/10.1108/IntR-11-2017-0459>
- LaVecchia, G. (2008). Green: the new gold. *Restaurant Hospitality*, 92(4).
- Liu, S.Q., Choi, S., & Mattila, A.S. (2019). Love is in the menu: Leveraging healthy restaurant brands with handwritten typeface. *Journal of Business Research*, 98(May), 289-298.
- Liu, S. Q., Bogicevic, V., & Mattila, A. S. (2018). Circular vs. angular servicescape: "Shaping" customer response to a fast service encounter pace. *Journal of Business Research*, 89, 47-56.
- Lo, A., King, B., & Mackenzie, M. (2017). Restaurant customers' attitude toward sustainability and nutritional menu labels. *Journal of Hospitality Marketing & Management*, 26(8), 846-867.
- Lockie, S., Lyons, K., Lawrence, G., & Grice, J. (2004). Choosing organics: a path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite*, 43(2), 135-46.
- Lu, L., & Gursoy, D. (2017). Does offering an organic food menu help restaurants excel in competition? An examination of diners' decision-making. *International Journal of Hospitality Management*, 63, 72-81.
- Luchs, M. G., Naylor, R. W., Irwin, J. R., & Raghunathan, R. (2010). The sustainability liability: Potential negative effects of ethicality on product preference. *Journal of Marketing*, 74(5), 18-31.
- Malone, S., McCabe, S., & Smith, A. P. (2014). The role of hedonism in ethical tourism. *Annals of Tourism Research*, 44, 241-254.
- McKercher, B. (2015). "Tourism: The quest for the selfish". In T. V. Singh (Ed.), *Challenges in tourism research* (pp. 87-96). Bristol: Channel View Publications.
- Miao, L., & Wei, W. (2013). Consumers' pro-environmental behavior and the underlying motivations: A comparison between household and hotel settings. *International Journal of Hospitality Management*, 32, 102-112.
- Miller, G.A. (2003). Consumerism in sustainable tourism: A survey of UK consumers. *Journal of Sustainable Tourism*, 11, 17-39.
- Mont, O., Neuvonen, A., & Lahleenoja, S. (2014). Sustainable lifestyles 2050: stakeholder visions, emerging practices and future research. *Journal of Cleaner Production*, 63(January), 24-32.
- Namkung, Y., & Jang, S.S. (2013). Effects of restaurant green practices on Brand equity formation: do green practices really matter?. *International Journal of Hospitality Management*, 33, 85-95.
- Namkung, Y., & Jang, S. (2007). Does food quality really matter in restaurants? Its impact on customer satisfaction and behavioral intentions. *Journal of Hospitality & Tourism Research*, 31(3), 387-409.
- Naspetti, S. & Zanoli, R. (2009). Organic food quality and safety perception throughout Europe. *Journal of Food Products Marketing*, 15, 249-266.
- Nunkoo, R. (2017). Governance and sustainable tourism: What is the role of trust, power and social capital?. *Journal of Destination Marketing & Management*, 6, 277-285.
- O'Keefe, D. J. (2016). Evidence-based advertising using persuasion principles: Predictive validity and proof of concept. *European Journal of Marketing*, 50(1/2), 294-300.
- O'Keefe, D. J. (2002). *Persuasion: Theory & research* (2nd ed.). Thousand Oaks: Sage.
- Ong, T. F., & Musa, G. (2011). An examination of recreational divers' underwater behavior by attitude-behavior theories. *Current Issues in Tourism*, 14(8), 779-795.
- Parguel, B., Benoît-Moreau, F., & Larceneux, F. (2011). Building brand equity with environmental communication: an empirical investigation in France. *EuroMed Journal of Business*, 6(1), 100-116.
- Park, S.Y., & Millar, M. (2016). The US traveler's familiarity with and perceived credibility of lodging ecolabels. *Journal of Vacation Marketing*, 22(1), 3-12. <https://doi.org/10.1177/1356766715585904>

- Park, C.W., Jaworski, B.J., & MacInnes, D. (1986). Strategic brand concept image management. *Journal of Marketing*, 50(October), 135-45.
- Petty, R. E., Gleicher, F., & Baker, S.M. (1991). Multiple roles for affect in persuasion. In J. Forgas (Ed.), *Emotion and social judgments*. New York: Pergamon.
- Pizam, A. (2009). Green hotels: a fad, ploy or fact of life?. *International Journal of Hospitality Management*, 28(1), 1.
- Ragin, C. C. (2008). *Redesigning social inquiry: Set relations in social research*. Chicago: University of Chicago Press.
- Richins, M. L. (1997). Measuring emotions in the consumption experience. *Journal of Consumer Research*, 24 (September), 127-146.
- Robinson, R., & Smith, C. (2002). Psychosocial and Demographic Variables Associated with Consumer Intention to Purchase Sustainably Produced Foods as Defined by the Midwest Food Alliance. *Journal of Nutrition Education and Behavior*, 34(6), 316-325.
- Ruvio, A., & Shoham, A. (2007). Innovativeness, exploratory behavior, market mavenship, and opinion leadership: An empirical examination in the Asian context. *Psychology & Marketing*, 24(8), 703-722.
- Schierl, T. (2001). *Text und Bild in der Werbung: Bedingungen, Wirkungen und Anwendungen bei Anzeigen und Plakaten*. Köln: Herbert von Halem.
- Schmitt, B. (1999). Experiential marketing: A new framework for design and communications. *Design Management Journal*, 10(2), 10- 16.
- Schultz, P. W., Khazian, A. M., & Zaleski, A. C. (2008). Using normative social influence to promote conservation among hotel guests. *Social Influence*, 3(1), 4-23.
- Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18, 429-434.
- Sgalitzer, H. A., Brownlee, M. T. J., Zajchowski, C., Bricker, K. S., Kelly, C. Z., & Powell, R. B. (2016). Modelling travellers' philanthropy: Tourists' motivations to donate at Sweetwater Chimpanzee Sanctuary. *Journal of Ecotourism*, 15, 1–20.
- Shahzalal, M., & Font, X. (2018). Influencing altruistic tourist behaviour: Persuasive communication to affect attitudes and self-efficacy beliefs. *International Journal of Tourism Research*, 20(3), 326-334.
- Shavitt, S. (1992). Evidence for predicting the effectiveness of value-expressive versus utilitarian appeals: A reply to Johar and Sirgy. *Journal of Advertising*, 21, 47–51.
- Shavitt, S. (1990). The role of attitude objects in attitude functions. *Journal of Experimental Social Psychology*, 26, 124–148.
- Sherif, M. (1936). *The psychology of social norms*. Oxford, England: Harper.
- Sobal, J., Bisogni, C. A., & Jastran, M. (2014). Food choice is multifaceted, contextual, dynamic, multilevel, integrated, and diverse. *Mind, Brain, and Education*, 8(1), 6-12.
- Sobal, J., & Bisogni, C.A. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine*, 38(1), 37–46. <https://doi.org/10.1007/s12160-009-9124-5>
- Stanford, D.J. (2014). Reducing visitor car use in a protected area: a market segmentation approach to achieving behaviour change. *Journal of Sustainable Tourism*, 22, 666-683.
- Steckenreuter, A., & Wolf, I.D. (2013). How to use persuasive communication to encourage visitors to pay park user fees. *Tourism Management*, 37(August), 58-70.
- Tajfel, H. (2010). *Social identity and intergroup relations*. Cambridge University Press.
- Thaler, R.H., & Sunstein, C.R (2008). Nudge: Improving decisions about health, wealth, and happiness. *Constitutional Political Economy*, 19(4), 356-360.
- Tonkin, M., Kemps, E., Prichard, I., Polivy, J., Herman, C.P., & Tiggemann, M. (2019). It's all in the timing: The effect of a healthy food cue on food choices from a pictorial menu. *Appetite*, 139(1), 58-70.

- Tóth, Z., Thiesbrummel, C., Henneberg, S. C., & Naudé, P. (2015). Understanding configurations of relational attractiveness of the customer firm using fuzzy set QCA. *Journal of Business Research*, 68(3), 723-734.
- Underwood, R. L., Klein, N. M. & Burke, R. R. (2001). Packaging communication: attentional effects of product imager. *Journal of Product & Brand Management*, 10(7), 403-422.
- Uriely, N., Reichel, A., & Shani, A. (2007). Ecological orientation of tourists: An empirical investigation. *Tourism and Hospitality Research*, 7, 161–175.
- Villarino, J., & Font, X. (2015). Sustainability marketing myopia: The lack of persuasiveness in sustainability communication. *Journal of Vacation Marketing*, 21(4), 326-335.
- Wang, Y. F., Chen, S. P., Lee, Y. C., & Tsai, C. T. S. (2013). Developing green management standards for restaurants: An application of green supply chain management. *International Journal of Hospitality Management*, 34, 263-273.
- Wansink, B., & Love, K. (2014). Slim by design: Menu strategies for promoting high-margin, healthy foods. *International Journal of Hospitality Management*, 42, 137-143.
- Wansink, B., & Chandon, P. (2006). Meal size, not body size, explains errors in estimating the calorie content of meals. *Annals of Internal Medicine*, 145(5), 326-332.
- Warren, C., Becken, S., & Coghlan, A. (2017). Using persuasive communication to co-create behavioural change–engaging with guests to save resources at tourist accommodation facilities. *Journal of Sustainable Tourism*, 25(7), 935–954.
- Wehrli, R., Priskin, J., Demarmels, S., Schaffner, D., Schwarz, J., Truniger, F., & Stettler, J. (2017). How to communicate sustainable tourism products to customers: results from a choice experiment. *Current Issues in Tourism*, 20(13), 1375-1394.
- Wells, L.E., Farley, E., & Armstrong, G.A. (2007). The importance of packaging design for own-label food brands. *International Journal of Retail & Distribution Management*, 35(9), 677-690.
- White, K., & Simpson, B. (2013). When do (and Don't) normative appeals influence sustainable consumer behaviors?. *Journal of Marketing*, 77(2), 78-95.
- Wier, M., O'Doherty Jensen, K., Mørch Andersen, L., & Millock, K. (2008). The character of demand in mature organic food markets: Great Britain and Denmark compared. *Food Policy*, 33(5), 406-421.
- Willcox, D. C., Willcox, B. J., Todoriki, H., & Suzuki, M. (2009). The Okinawan diet: health implications of a low-calorie, nutrient-dense, antioxidant-rich dietary pattern low in glycemic load. *Journal of the American College of Nutrition*, 28(sup4), 500S-516S.
- Woodside, A.G. (2010). *Case study research*. Bingley: Emerald Group Publishing.
- Woodside, A. G. (2014). Embrace•perform•model: Complexity theory, contrarian case analysis, and multiple realities. *Journal of Business Research*, 67(12), 2495-2503.
- Xu, Y., & Jeong, E. (2019). The effect of message framings and green practices on customers' attitudes and behavior intentions toward green restaurants. *International Journal of Contemporary Hospitality Management*, <https://doi.org/10.1108/IJCHM-05-2018-0386>
- Zanoli, R., & Naspetti, S. (2002). Consumer motivations in the purchase of organic food – A means-end Approach. *British Food Journal*, 104(8), 643-653.
- Zanon, J., & Teichmann, K. (2016). The role of message strategies in promoting eco-friendly accommodations. *International Journal of Culture, Tourism and Hospitality Research*, 10(4), 410-423.

CONCLUSION

Overall the contributions of each paper outline several interesting implications from the theoretical perspective, from the managerial point of view and from future research topics that can potentially be addressed.

Theoretical implications

The paper about organizational routines emphasizes the transformative power of rituals (Smith and Stewart 2011) in effectively implementing a routine redesign and in productively guiding participants' actions. All the hypotheses are supported, implying that the ritual-based redesign enhances the degree of sharing of the individual understandings about why the routine is being performed, it reduces the variability in the execution time of the routine, and it improves the routine's effectiveness. Hence, rituals emerge as strong transformative tools of routines dynamics, advancing the theoretical body on organizational routines' microfoundations. Furthermore, the redesign of the welcome entrée routine provides empirical evidences on how a ritual-based redesign represents both a transformational and a stabilizing role for the organization. On the one hand, the ritual-based redesign maintains stability by instilling a sense of *communitas* (Islam and Zyphur 2009), spreading shared basic meanings in the group (Schein 2004). On the other hand, the ritual-based redesign facilitates a transformation of the individuals involved in the routine by shaping both their cognition and their actions in serving the welcome entrée. The understanding of this "change within stability" (Islam and Zyphur 2009) function constitutes another important theoretical advancement in the routines' literature.

Concerning the topic of sustainability in the hospitality industry, overall the three papers depict the following broad theoretical advancement. Several reviewed papers and the study on the impact of green food on consumers' purchase attitudes and behavioral intentions toward a hotel stay emphasize that consumers with a high degree of consciousness on environmental problems tend to prefer to book a green property (Han et al., 2010; 2009). In addition, many guests prefer to stay in a green property not only for a matter of intrinsic quality characteristics (e.g. allergen-free features), but also for the personal emotions experienced in a green property (e.g. preserving the long-term maintenance of the environment for the future generations) (Han et al., 2011). In other words, such emotional and intangible benefits might drive consumer sustainable preferences in the

hospitality industry. This concept is exceedingly emphasized by the experiment on nurturing green food consumption, where “experiential” appeals combined with visual cues are preferable over purely informative appeals in hedonistic settings such as food consumption on holidays. In the conducted experiment the displaying of the picture of the field and farm where the vegetables are grown may instill a sense of love and care able to persuade tourists (Fuchs et al., 2015; Liu et al., 2019). In that way, effort and passion for creating a food offering in the best benefit of customers are successfully perceived by guests and communicated to them. Moreover, the ability to visit the farm where vegetables are grown is likely to increase the trustworthiness of the message and the perceived behavioral control (Stanford, 2014). Transferring a mere message into a promise of a potential emotional experience (such as a visit to a farm), means giving guests the opportunity to play an active role through participation (Cialdini & Goldstein, 2004; Jameson & Brownell, 2012; Kachel & Jennings, 2010; Stanford, 2014).

Furthermore, all the contributions corroborate the theoretical concept of selfish altruism proposed by Miller (2003). Miller (2003) emphasized this concept by describing how environmentally conscious consumers are more willing to purchase products that are of benefit to them as well as to the external environment, rather than just to the rest of world. In the specific context of green food consumption, the personal (healthiness/wellbeing) and external (environmental) benefits appear well balanced and mixed together.

Managerial implications

The management-focused paper provides some useful guidelines for practitioners. In fact, since the restaurant industry is traditionally associated with high stress, long hours, low employees’ commitment and high turnover (Madera et al. 2013), the implementation of mechanisms through which core values can be shared and reinforced seem critical and challenging in the field (Durand et al. 2007). Several studies in the dining out context examine rituals from a consumer perspective as marketing tools (Visser 2015, Osman et al. 2014). Shifting the focus away from customers’ to the employees’ perspective, this study demonstrates that individuals learn how to perform the ritual itself and, while performing the ritual, they also learn to recognize the underlying value as to why they are performing the ritual. Hence, the ritual-based redesign can operate as a mechanism to develop an organizational culture characterized by strong and shared values that guide new and existing employees’ behaviors in a more efficient and less time-consuming way.

From the sustainability perspective, the main managerial contribution lies on providing useful operational directions and guidelines to hotel and restaurant practitioners willing to effectively promote a green philosophy especially related to the topic of sustainable food.

As marketing communications about green efforts is becoming increasingly important (Xu & Jeong, 2019) and as food consumption represents a routinized and partially unreflective process (Hall, 2013; Mont et al., 2014), the communication of its features in a way that reaches consumers at the emotional level may be effective. Human associations and perceptions that the food offering is full of love and passion together with the redesign of menus by presenting information on the nutritional qualities of food and the indication of the food provenance can address the need of health and personal well-being consciousness and foster the progress toward the goal of sustainability in hospitality.

Future research agenda

Critical issues in routine dynamics remain to be explored by future research. Specifically, a wider range of restaurants (i.e. upscale, casual dining, self-service) should be taken in consideration, increasing the variability of the guest mix and of the menu characteristics, in order to further the understandings about the potential of consumption rituals in generating positive changes at individual and social level across different types of restaurants.

Adopting a broader perspective, future research should focus on developing a more integrated microfoundations theory of routines that not only focuses on routine epistemology such as how routines change, but also on routine ontology by investigating which routines are amenable to change.

Concerning the sustainability perspective, future studies would benefit from integrating in a more detailed way the individual characteristics in the analysis. For instance, the paper that investigates the impact of green food on consumers' purchase attitudes and behavioral intentions toward a hotel stay would benefit from taking into full account some specific sociodemographic characteristics. Similarly, the experiment about nurturing the consumption of green food could further investigate personal traits that can potentially influence the individual perceptions toward persuasive messages. Considering in the analysis the consumer's need for uniqueness scale (CNFU scale) (Ruvio & Shoham, 2007), which posits that in a social context an individual can be categorized along a dimension of social inclusiveness-distinctiveness, could be a valuable attempt for

enriching future research. Overall, a fully integration in the analysis of the individual characteristics, either sociodemographic or about personality, would be beneficial to more effectively address the issue of sustainability in hospitality.

In addition, understanding the impact of who endorses a persuasive message can be a promising stream of research in sustainability. In particular, endorsement of food recommendations (Kusumasondjaja & Tjiptono, 2019) and measuring their respective persuasive strength represents a valuable stream for future research.