Online consumer behaviour and its relationship to website atmospheric induced flow: Insights into online travel agencies in China

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ABSTRACT

Although the study of flow has recently received a lot attention, little is published about what factors controllable by firms influence its formation. Furthermore, there is a lack of knowledge between the relationship of website atmospheric cues and flow experience. Using a stimulus–organism–response framework (S–O–R framework) as the theoretical basis, this study examines the impact of consumer perceptions of website atmospheric cues (informativeness, effectiveness and entertainment) on the development of flow and its subsequent impact on purchase intention and satisfaction. A self-administered online survey was used for data collection through an internet market research firm which randomly selected individuals from its online panel. Our results support the validity of the S–O–R framework in the context of online tourism and indicate that flow fully mediates the three site atmospheric cues with regards to purchase intention and satisfaction with the travel website. This study enhances our understanding on the determinants of online purchase intention and satisfaction as well as on how a proper web atmospheric design alters consumer shopping experience which entices favourable purchase intention and generates satisfaction.

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1. Introduction

According to a report published by China Electronic Commerce Research Centre (CECRC) in 2012, business-to-consumer (B2C) market transactions in China reached US$89.21 billion and Chinese online sales represented 6.2% of total retail sales. In 2012, online travel arrangement and reservation services accounted for 43.9% (US$27.23 billion) of the B2C e-commerce market, an increase by 30% over the previous year (CECRC, 2012). Drawing on these statistics, it can be noted that online tourism is gathering pace in becoming the leading driver in B2C e-commerce. As a result travel websites have been regarded as central models of online marketing and e-commerce in the travel industry (Wang and Fesenmaier, 2004).

In recent years, the online experience in the tourism industry has become very important throughout the world. Providing consumers with a compelling experience has emerged as an important issue in developing favourable consumer behaviour responses and outcomes in the online tourism environment (Huang et al., 2010; Nusair and Parsa, 2011). When seeking to understanding the provision of online consumption experiences,

researchers have highlighted the importance of flow. For example, Hoffman and Novak (1996) argue that "creating a commercially compelling website depends on facilitating a state of flow for consumers [and that]… an important objective for markets is to provide these opportunities". Despite an improved understanding on the contribution of flow to the creation of a compelling experience, little effort has been devoted to the investigation of the drivers of the flow experience, especially in an online tourism setting.

With the proliferation of online retailing worldwide, consumers are having more choices than before on where they shop. With the increased competition, online vendors tend to differentiate themselves from rivals by relying on web atmospherics to create an environment that could evoke the positive emotional and cognitive state of online shoppers that further entices behaviour such as willingness to spend more time and money on their website (Kim and Lennon, 2010; Mazaheri et al., 2013). Ong et al. (2012) suggest that the well-designed retail store atmosphere provides a valuable platform for improving flow opportunities and potentially better shopping experiences. Kim and Lennon (2012) argue that effective atmospherics may lead to a high level of interaction which is a critical factor that yields the state of flow. In the context of online shopping, advancements in web technology and communication tools have resulted in greater interactivities between consumers and online vendors and also now provide the mechanisms for improving flow opportunities (Hausman and

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Siekpe, 2009). Dailey (2004) suggests that online vendors should consciously design web environments to facilitate consumer interaction in order to improve shopping experiences. Given the importance of flow state in online shopping, online vendors are interested in the design of web atmospherics and utilization of specific atmospheric cues to enhance consumers′ flow experiences (Hausman and Siekpe, 2009). Achieving flow through delivering superior web atmospherics has important implications for consumers becoming 'cognitively locked in' and subsequently loyal to the web. In this sense, facilitating the flow experience through web atmospherics should be a focal research area for internet researchers as it is the interactive web environment that connects the firm and the consumer.

Drawing upon the above discussion, flow, web atmospherics and compelling experiences have risen to prominence. However, to the authors′ knowledge, little is currently known about the designed factors and configurations of web atmospherics that optimize the flow experience for the consumer. This is particularly the case for travel products (e.g. tourist attractions, honeymoon travelling packages) as the flow is an ideal state to be delivered to consumers and facilitates buying behaviour and satisfaction. Thus, understanding the effects of controllable web atmospheric components/cues on the development of flow experiences is critical for the travel agency to induce positive behavioural outcomes. Understanding factors that facilitate flow will present companies with information regarding the allocation of resources and capabilities that are required to achieve such customer outcomes and meet the travel agency's objectives in relation to sales and the like.

Therefore, the objective of the study is to enhance understanding of the role of the design and delivery of controllable website atmospherics in facilitating the flow experience. To this end, based on the stimulus–organism–response (S–O–R) framework (Mehrabian and Russell, 1974), this study examines the impacts of different web atmospheric cues (stimuli) on flow formation (organism), and the effects of flow on online purchase intention and satisfaction (responses) towards the online travel website by reviewing and integrating literature from a number of areas including information systems, e-commerce, marketing and psychology. In doing so, this study contributes to existing literature by theoretically identifying multiple web atmospheric cues that appear to have the potential to be related to flow formation and providing empirical tests of the influences of the flow experience on online purchase intention and satisfaction. It also offers guidance for travel website managers regarding the design of web atmospherics to generate favourable outcomes such as flow, behavioural intention and satisfaction. Focusing on a specific domain such as online tourism appears prudent and helps provide a strong contextual perspective for theory development and testing.

The rest of the paper is structured as follows: in Section 2, a review of the relevant bodies of literature is undertaken, after which hypotheses are developed in Section 3. Methodologies employed for the implementation of the study are outlined in Section 4. Section 5 reports major findings, followed by a discussion in Section 6 and theoretical and managerial implications in Section 7. The conclusion is presented in Section 8.

2. Literature review

2.1. The S–O–R framework

The theoretical basis of the S–O–R framework is based on environmental psychology proposed by Mehrabian and Russell (1974). This framework suggests that stimuli are antecedents that affect consumers′ emotional states (organism), whose response

may result in their behaviour or intentions. Donovan and Rossiter (1982) were the first to apply the S–O–R framework to the retail context and considering that stimuli are operationalized as environmental signals (atmospheric cues), and organism, depending on their emotional and cognitive states, will give response that may be an approach or avoidance (Donovan and Rossiter, 1982). The S–O–R framework has been extensively tested in several studies of traditional retail stores (Ong et al., 2012; Vieira, 2012).

The stimuli in the S–O–R framework are represented by a set of attributes that affect consumer perception (Mazursky and Jacoby, 1986). Those attributes are the starting point for the process of consumer behaviour, this means, attributes are cues that influence the consumer cognition and will arouse them consciously or unconsciously to a given action (Oh et al., 2008). In the retail context, attributes can include the social factor (people in the shop, other customers and employees), design factor (e.g., layout cleanliness and colour), and ambient factor (e.g. smells and sounds) (Eroglu et al., 2001, 2003). The organism undergoes a process of internal intervention between the stimuli and the reaction of the individual. In this process, the individual converts the stimuli into meaningful information; this means that perception such as sensations and thoughts on the different activities can cause a change in the individual's emotional and cognitive state (Mehrabian and Russell, 1974). The response is the reaction (attitudinal or behavioural) of the individual.

In the current study, the stimuli are operationalized as various web atmospheric cues that the travel website carries. The organism is the consumer′s cognitive judgement of the online experience. It is expressed in the form of flow experience. According to previous studies (Hoffman and Novak, 1996; Koufaris, 2002), flow is a psychological state that is a cognitive episode that fluctuates with situational contexts and may be influenced by an individual′s interaction with said situation. Floh and Madlberger (2013), for example, empirically demonstrate that an online website with appealing design and well-established organization pleases their customers, and eventually leads them to a compelling shopping experience, e.g., flow experience. In this sense, this study views flow as an organic variable that is affected by stimuli (i.e. web atmospheric cues).

The responses are categorised as consumer purchase intention and satisfaction as they reflect consumers′ behavioural outcomes. The S–O–R framework has been extensively tested in previous online store studies and proved to be valid in predicting online shopper′s cognitive judgment and subsequent behaviour (Chang and Chen, 2008; Jai et al., 2013; Kawaf and Tagg, 2012; Kim and Lennon, 2013; Liu et al., 2013; Manganari et al., 2011; Richard, 2005; Rose et al., 2012). Chang and Chen (2008), for example, demonstrated that online environmental cues (web site quality and web site brand) have positive impacts on cognitive judgements (consumers′ trust and perceived risk), both of which have a subsequent positive effect on consumer purchase intention. The components of stimulus, organism, and behavioural tendency in online travel environments are further investigated below.

2.2. Web atmospherics

In traditional retailing, Kotler (1973) defined atmospherics as the "conscious designing of the space to create specific effects on buyers". Baker et al. (1994) suggested that the store environment and atmospherics are more influential than other marketing inputs that are not present at the point of purchase. Applied to the online shopping environment, web atmospherics can be defined as the "conscious designing of web environments to create positive effects in users in order to increase favourable consumer responses" (Dailey, 2004). Just like atmospherics in a conventional store which provide important information about the retailer and