Emotions in Motion: 
The Combined Effect of Positive and Negative Emotions on Personalised E-Commerce

Ilias O. Pappas, Norwegian University of Science and Technology, Trondheim, Norway
Panos E. Kourouthanassis, Ionian University, Corfu, Greece
Sofia Papavlasopoulou, Norwegian University of Science and Technology, Trondheim, Norway
Vassilios Chrissikopoulos, Ionian University, Corfu, Greece

ABSTRACT

This research examines the combined effect of positive and negative emotions on online shopping behaviour when customers use personalised services. Data from 421 customers, experiences with personalised online shopping, were used to empirically validate the effect of the level of emotions of different valence and intensity on their intention to purchase online. The findings suggest that as the intensity of positive emotions increases, shoppers are more willing to purchase from the online store. Nevertheless, this association is statistically significant only in those cases that the sample exhibits low intensity of negative emotions. Moreover, an increase on the intensity of negative emotions tends to reduce shoppers’ intentions to purchase. Results show that online vendors should aim to induce positive emotions since they are more important than negative ones. This paper offers a first step in evaluating the multidimensional role of emotions in personalised e-commerce.

KEYWORDS
Customer Behaviour, E-Commerce, Intention to Purchase, Negative Emotions, Online Shopping, Personalisation, Personalised Services, Positive Emotions

1. INTRODUCTION

The use of interactive systems is an important issue for online organizations, which attempt to offer to their customers an increasing number of information to cover their needs, and help them identify their product preferences. Consequently, it is of high interest to better understand these systems, their effectiveness and requirements (Xu et al., 2014). Personalised services, through their recommendations, may help users to cope with the overwhelming plethora of information, sometimes at the expense of privacy, since profiling is based on personal and private information. Accordingly, specific strategies are needed to deliver personal messages and targeted information to different users (Lee & Cranage, 2011). Users may benefit from personalised services, since they offer convenience, efficiency and individualization. Personalisation is increasingly included in various services and offering personalised information may affect customers’ perceptions towards online shopping and increase their loyalty (Zhou et al., 2014). Building on loyalty and on the value of the relationship between customers and firms may lead to more successful personalised services or products, as it helps understand customers’ needs (Namvar & Khalilzadeh, 2013). The majority of the studies in personalised e-commerce focus on the cognitive factors that influence customers’ behaviour (e.g., Ho & Bodoff, 2014). Nonetheless,
the important role of affective factors and emotions in the area needs further investigation (Pappas et al., 2014a; Pappas et al., 2016a).

Affective factors are important determinants of user behaviour and may be induced by interactive technologies, such as personalised services (Hsieh et al., 2014). For example, the use of SMS advertising may influence customers’ attitudes (Dharmadasa et al., 2014). Further, Individuals experience different emotions during online shopping, which affect their behaviour, and previous studies have examined the important role of emotions in online shopping (Kuo & Wu, 2012; Penz & Hogg, 2011). Positive emotions have been found to increase customers’ satisfaction with an online vendor along with their purchase intentions, as opposed to negative emotions, which have a negative effect. However, these effects have not been verified by all studies (Pappas et al., 2014a; Chea & Luo, 2008), suggesting that a different approach on emotions is needed.

This study examines the role emotions in online shopping based on personalised services and provides evidence on how a change in their intensity influences customers’ intention to purchase. Offering personalised information in online shopping is frequent the past few years, mostly by the implementation of personalised services (Xu et al., 2014), however the role of emotions on shopping behaviour when individuals receive and process personalised information needs further investigation. Extant research has proved the importance of incorporating emotions in personalised services (Pappas et al., 2014a; 2016a), and emphasizes on the influence of affective factors on purchase behaviour (Koo and Ju, 2010; Verhagen & Dolen, 2011). Nonetheless, this studies treat emotions unidimensionally and they only examine particular emotional valence or control. The two main types of emotions (i.e., positive and negative emotions) are correlated (Chang et al., 2014) and are likely to exist simultaneously in customers (Pappas et al., 2014a; 2016a). However, the effect of different levels of emotion on intention to purchase when using personalised services remains largely understudied.

Therefore, various aspects of emotions should be examined in an attempt to better explain their effects on customer behaviour, and since, both types of emotions may occur at the same time, a more detailed examination of emotions is needed. To better capture the formulation of emotions during online personalised shopping sessions we use a measurement scale of twenty distinct emotions. The research adopts the emotions' classification of Scherer et al (2013), by decomposing emotions into four categories based on their intensity (strongly negative, weakly negative, strongly positive, weakly positive). As such, our study aims to explore the relationships between four types of emotions and customers’ intention to purchase. Specifically, based on the variances of the strength of emotions, this study addresses the following research question:

**RQ:** How a change in emotion intensity that occurs when using personalised services, leads to increased or reduced intention to purchase?

The remained of this paper is organized as follows. The next section includes a review of the literature on personalisation, emotions and intention to purchase. In section 3, the methodology is presented followed by the findings, in section 4. The final section discusses the findings and draw conclusions highlighting theoretical and practical implications.

### 2. LITERATURE REVIEW

The ability to offer improved online services to customers is always an important issue in online shopping, which based on customer information, can create and offer personalised services. Through online personalisation firms may increase advertising and sales revenue (Ho & Bodoff, 2014).
Employing a Mixed Method to Explore Mobile Social Media Users' Big Data Privacy Concerns
[www.igi-global.com/chapter/employing-a-mixed-method-to-explore-mobile-social-media-users-big-data-privacy-concerns/127202?camid=4v1a](www.igi-global.com/chapter/employing-a-mixed-method-to-explore-mobile-social-media-users-big-data-privacy-concerns/127202?camid=4v1a)

Actor Effect: A Study on Historical Figures Who Have Shaped the Advertising Narration
Bilgen Baal (2017). *Narrative Advertising Models and Conceptualization in the Digital Age* (pp. 34-60).
[www.igi-global.com/chapter/actor-effect/177036?camid=4v1a](www.igi-global.com/chapter/actor-effect/177036?camid=4v1a)