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## 1. Introduction

The upsurge in the use of social media and technological innovations has provided organisations with many opportunities to invite customers to participate in their activities (Heidenreich, Handrich, Kandampully, & Kandampully, 2015). One way in which customers can participate is through co-production. According to Ranjan and Read (2014), co-production ‘consists of direct or indirect co-working with customers or participation in the product/service design process’ (p. 3). The marketplace is increasingly seeing a change in the role of customers, from passive receivers to active co-producers of goods and services (Heidenreich, Wittkowski, Handrich, & Falk, 2014). The reason for this is because consumers believe that they understand their own tastes and preferences much better than the professional designers at firms (Moreau & Herd, 2010), thus they want to play an active role in designing goods and services (Franke, Schreier, & Kaiser, 2010). This is shown by the increased preference to purchase self-designed T-shirts, watches, scarves and mobile phone covers compared to those professionally designed by firms (Franke & Piller, 2004; Franke et al., 2010). Co-production is expressed as a win-win scenario, whereby customers experience joy and satisfaction while participating and organisations capitalise on customer satisfaction and maximise profits (Chen, Tsou, & Ching, 2011).

One of the main benefits of co-production is to give customers control over how they choose to design products or services (O’Hern & Rindfleisch, 2010). This shift in control from firms to customers allows the consumer to feel autonomous while engaging in the co-production activities (Etgar, 2008). Autonomy is defined as a psychological need to experience behaviour as emanating from or endorsed by the self, rather than being pressured by external forces (Reeve, Nix, & Hamm, 2003). Despite autonomy being one of the reasons customers undertake co-production activities (Dahl & Moreau, 2007), organisations face major challenges relinquishing control to consumers while planning for such activities (O’Hern & Rindfleisch, 2010). Hoyer, Chandy, Dorotic, Krafft, and Singh (2010) assert that attempts to restrict customers’ autonomy in co-production platforms reduce their willingness to contribute ideas. This leads us to ask the question of how co-production firms can provide customers autonomy. Using self-determination theory (SDT), we propose a conceptual framework that can be used by organisations to augment customers’ perception of autonomy without relinquishing control.

SDT posits that the key to increasing this perception lies in the social environment (Deci & Ryan, 1987), as it can support (or thwart) autonomy. Autonomy support does not refer to the characteristic of the task itself, but to the design of the social environment created for the individuals during the activity. Through review and analysis of extant literature on support factors, we found three ways in which the social environment can be designed to provide autonomy support: provision of choice, rationale and perspective taking (for example, see Deci, Eghrari, Patrick, & Leone, 1994). While literature has found that the impact of these three support factors on perceptions of autonomy is well understood, what is lacking is an understanding of this impact (with little exception in Reeve & Jang, 2006; Reeve et al., 2003).

To perceive autonomy, an individual needs to experience an inner endorsement of their actions, high psychological freedom and a sense that one's actions are truly self-chosen (Reeve et al., 2003). Research that has studied perceptions of autonomy as an outcome of interest provides evidence that these support factors do not always enhance feelings of autonomy (Reeve & Jang, 2006; Reeve et al., 2003). In some instances, when the choices offered were not found meaningful (Williams, 1998) or did not allow for self-regulation (Reeve et al., 2003), they did not have an impact on perceived autonomy. Thus, it is not the mere act of choosing that provides individuals with a sense of autonomy (Reeve et al., 2003), but the type of choice offered that is important to influence their perceptions. Additionally, in some instance, the provision of rationales did not have a significant impact on students' perceived autonomy (Reeve & Jang, 2006; Patall, Dent, Oyer, & Wynn, 2013). We argue that the reasons for engaging in an activity will depend on the benefits one seeks from the activity itself. Thus, it is imperative for research to understand the influence of different types of rationales provided on perceived autonomy, rather than focusing on the mere presence or absence of a rationale.

Assor, Kaplan, and Roth (2002) discovered that teachers taking their students' perspectives did not have an influence on their perceptions of autonomy. So far, autonomy support research has studied the perspective taker to be the support provider (see Assor et al., 2002; Reeve, 2006). However, in most cases, when individuals face problems they often turn to their peers for support. We therefore propose that it is important for research to understand whether different degrees of perspective undertaken by peers have an influence on perceived autonomy. Thus, we postulate that different

types of choice, rationale and degrees of perspective taking existing in a co-production platform can have a varying impact on consumers' perceived autonomy. Therefore, our study is set out to answer the central question: *what is the impact of different types of choice, rationale and degrees of perspective taking on perceived autonomy?*

The main aim of this paper is determining whether certain types of choice (action vs. option) and rationale (intrinsic vs. extrinsic) and different degrees of perspective taking (high vs. low) enhance consumers' perceived autonomy in co-production platforms. Further, it examines whether consumers' experience of perceived autonomy will positively influence key co-production outcomes such as customers' participation enjoyment, repeat participation intentions and willingness to pay mediated via their intrinsic motivation.

This research makes contributions to both knowledge and managerial practice. To our knowledge, this is a first-of-a-kind study that expands the co-production literature by providing a conceptual model that maximises perceptions of autonomy in co-production platforms. Furthermore, this study deepens the SDT theory by demonstrating that intrinsic (vs. extrinsic) rationale and high (vs. low) perspective taking in brand communities increase perceptions of autonomy. More importantly, this study finds that when customers are given an intrinsic rationale in conditions of action choice, they perceive higher autonomy than customers who received an extrinsic rationale in option choice conditions. Findings further suggest that consumers experience higher perceptions of autonomy when they are given an intrinsic rationale in conditions of high perspective taking compared to when they receive extrinsic rationales and low perspective taking. Further, the study validates that perceptions of autonomy successfully influence key co-production outcomes (such as participation enjoyment, repeat participation intentions and willingness to pay) mediated via intrinsic motivation. Lastly, this study offers organisations strategic guidelines on how best to design their websites to maximise perceived autonomy on their online co-production platforms.

There are five main sections within this paper. We first a literature review on autonomy, which highlights the importance of autonomy as a psychological need. We then present the conceptual framework and justify the hypotheses. Next, we describe the methodology used to implement the research and the research design. Then we present the results of the data analyses and discuss the findings and implications. The final section provides a conclusion to the research study.

## 2. Literature Review

### 2.1 Autonomy

The conceptualisations of autonomy can be understood by the phenomenological accounts of autonomy (Ricoeur, 1966; Pfander, 1967) and the organismic view of SDT (Deci & Ryan, 1985a; Deci & Ryan, 1987; Ryan & Deci, 2000b). The etymological origins of the term can be found in its translation from Ancient Greek: *auto-* ('self') and *nomos* ('rule', 'governance' or 'law') (Bellezza, Gino, & Keinan, 2014). Phenomenologists have made a distinction between autonomous behaviours and non-self-regulated behaviours (Ryan, Kuhl, & Deci, 1997). For instance, Pfander (1967) distinguished 'self-determined' or 'willed' acts, which are reflected from one's own will, from other actions. He asserted that the external input (such as social pressure) or the inner will can supply the motivation for self-determined acts, as long as the self or the 'ego-center' endorses these actions. Ricoeur (1966) provided a similar account to Pfander, with self-determined acts defined as those that are fully endorsed by the self and are in accordance with abiding values and interest. Thus, autonomy does not only reflect a person's independent initiatives, but also those initiatives that are undertaken due to external influences, if they are endorsed wholeheartedly (Ricoeur, 1966). This line of thinking underlies Heider's (1958) and DeCharms' (1968) work on locus of causality, from which SDT evolved.

#### 2.2.1 Choice

Choice is present when the environment encourages customers to freely decide (a) whether or not they would like to engage in a particular behaviour (Deci et al., 1994) and (b) between various options (Chatzisarantis, Kee, Thaug, & Hagger, 2012b). Provision of choice is found to have a powerful motivating effect on engagement, because people are more likely to undertake an action or behaviour if they believe they chose it (Lewin, 1947). Exercising choice is considered a trigger for perceived autonomy (Deci et al., 1994), because for individuals to act from within they need to make decisions or choices that reflect their inner self.

Traditionally, when examining perceptions of autonomy support, studies research the presence or absence of choice and its effect on these perceptions (see Sheldon & Krieger, 2007; Williams et al., 2002; Deci et al., 2001; Chatzisarantis et al., 2012a). Such studies show that choice is an

important autonomy support factor (see Table 1). However, there has been some evidence that providing alternatives may have no effect on motivation and performance-related outcomes (Flowerday, Schraw, & Stevens, 2004; Flowerday & Schraw, 2003). Moreover, when studying perceptions of autonomy as an outcome of interest, there is evidence that provision of choice does not always increase the sense of autonomy (Reeve et al., 2003). When the options provided are not meaningful (Williams, 1998) or interesting (Flowerday et al., 2004) to the subjects, they do not experience psychological freedom in their decision-making. Thus, it is not the mere act of choosing that provides individuals a sense of autonomy (Reeve et al., 2003), but the type of choice provided that is important to influence perceptions of autonomy.

Based on the classification compiled by Reeve et al. (2003), we distinguish choices based on actions or options. Reeve et al. (2003) operationalised action choices as flexibility in pace (e.g., ‘Do you want to continue working on this puzzle or switch to a different one?’). Option choices were operationalised as choosing the order between different options (e.g., ‘Which of these puzzles do you want to start with?’). We propose that understanding action choice simply as flexibility in pace offers a limited perspective on being able to control one’s actions. Therefore, we expand this definition and operationalise action choices based on the suggestions of Thomas and Oldfather (1997), who provide a social constructivist conceptualisation of learning and literacy and tie their interpretations into self-determination theory. Their study illustrates ways in which a social constructivist classroom can support students’ motivation for literacy learning by enhancing their self-determination, competence and empowerment. Thomas and Oldfather (1997) propose three ways in which a student could feel self-determined: (1) by selecting and organising the way to present their work (method), (2) by selecting their own pace to pursue goals (pace), and (3) selecting activities that better their own learning (effort).

In our study, action choices are therefore present in a co-production environment, when individuals are given the freedom to choose the work method, pace and effort (Thomas & Oldfather, 1997) while undertaking the design activity. Option choices, instead, are present in an environment when individuals are given various preferences to select from (Reeve et al., 2003) in order to co-produce a design.