What are the social and personal drivers to engage in co-creation? A study of UK 7–13-year-olds

Abstract

Purpose – The aim of this study is to explore the social and personal drivers of co-creation in children.

Design/methodology/approach – A sample of 463 children aged between 7 and 13 were recruited. Utilising electronic event-based diaries, 2,631 entries were captured during an 18-month period.

Findings – Data from 861 entries identified a series of anomalous external social and personal factors that drove children to engage in co-creation. These were for maintaining external relationships, dealing with addiction to the co-creation process and dealing with personal loneliness.

Research limitations/implications – The study reveals new, unconventional and gender-specific behaviours that might assist marketers in understanding children's complex relationships with co-creation and brands.

Originality/value – This is the first study of its kind to examine children's social and personal drives to engage in co-creation.

Keywords: Co-creation, Children, Brand Management, Social Drivers, Personal Drivers

Introduction

Brands have become the focal points of consumers' lives (Handa and Ahuja, 2020). They are an intrinsic part of an individual's consumption journey and are bound in social exchange (Eng and Jarvis, 2020); engagement with them offers individuals a myriad of opportunities for social exchange (Sarkar and Banerjee, 2020). Brand managers have been keen to capitalise on the information that stems from these social exchanges (Thomas *et al*., 2020; Xiao *et al*., 2020) and one pertinent area in this context is co-creation (Sarkar and Banerjee, 2019; Sharma *et al*.,2020). Co-creation "involves [customer] participation in the creation of the core offering itself […] through shared inventiveness, co-design or shared production of related goods" (Lusch and Vargo, 2006, p. 284). It is conceptualised as a collaborative (Veloutsou and Black, 2020), volitional action (France *et al*., 2018), in which consumers and organisations develop meaning (Veloutsou and Black, 2020). Marketing and brand managers have embraced the notion (Alam, 2020; Thomas, 2018), as co-creation facilitates individuals reconfiguring their role of customer to that of contributor and creator (Xiao *et al*., 2020), expressing personal acumen through discourse and through shaping and reshaping brand identities (Kennedy and Guzmán, 2016). Consequently, it is suggested that the relationship between the organisation and customers becomes inexorable (Cheung and To, 2020), as customers realise their potential effect on a brand's direction (Zhao *et al*., 2019).

A significant body of research has developed that explores the antecedents of consumer engagement in co-creation (Verleye, 2015), invariably through the lens of the service-dominant (S-D) logic approach and with an emphasis on aspects of co-conception, co-design, co-production, and co-promotion (Pandey and Kumar, 2020). However, these contributions have invariably utilised adult samples (Sarkar and Banerjee, 2019), limiting what is known about children's co-creative behaviours, despite the acknowledgement in the literature that brand-user characteristics impact upon co-creation activity (Trischler *et al.,* 2017). A review of the

extant literature presents an array of empirical papers that indicate that children *do* engage in co-creation, or 'participatory design' (Slingerland *et al*., 2020), but scrutiny of this body of work indicates that these investigations are highly contextual, and centred within education and educational policy (Breive, 2020; Catala *et al*., 2018; Clement, 2019; Novlianskaya, 2020; Paracha *et al*., 2019; Sharma *et al.*, 2020), child development (Slingerland *et al*., 2020), developmental disorders (Alsem *et al*., 2017; Huijnen *et al*., 2017; Whelan *et al*., 2015) and social learning paradigms (Bevelander *et al*., 2019; Crosby *et al*., 2020). Moreover, several of the above studies fail to incorporate children (Crosby *et al*., 2020; Sharma *et al*., 2020) and none of the works explore children and co-creation in the context of the marketing literature. To date, only Daems *et al.,* (2019) have looked at co-creation through a consumption lens, exploring advertising literacy, but even this contribution capitalised on 'four co-creation workshops' that were controlled (reflecting earlier work by Catala *et al*., 2018) and school based, and that did not capture volitional participation in the product design.

This, leads to the conclusion that there is a significant empirical gap when it comes to children and co-creation beyond what is clearly outlined above. At the time of writing, no work exists that explores the drivers of co-creation in children. That is the key orientation of this work and the gap that it attempts to fill. We state this as children are deemed to have notable value as consumers (Thomas *et al*., 2020), have their own intrinsic views on brands and are increasingly influential when it comes to brand engagement (Flurry, *et al*., 2014). As early as the age of 7 children have well-developed perceptions and attitudes toward brands with these relationships built, using technology (Nairn *et al*., 2008). Important to this work, children are said to want to have their voices and views heard when it comes to brands (Jones and Glynn, 2019) and are avid users of online platforms and forums (Jones and Glynn, 2019). Additionally, this key group manifest elements associated with co-creation insofar as they are active information-seekers, want to be informed and want to belong. Given this, we believe that this gap is a

significant one. It demands a thorough investigation since the literature denotes that children are subjected and exposed (Agante and Pascoal, 2019) to almost perpetual brand information and that brand preferences are established in early childhood (Folkvord *et al*., 2019). Furthermore, brand engagement for children is said to be a staple of their sociocultural development and part of their everyday life (Jones and Glynn, 2019), with new media expediting brand relationships (Helme-Guizon and Magnoni, 2019), ensuring that children are able to recognise and recall brands and engage with them through this critical developmental period (Barcelos and Rossi, 2014). More importantly, children are said to actively seek out brand interactions (Thomas *et al*., 2020) and develop brand relationships (Agante and Pascoal, 2019). Nevertheless, despite children's empirically proven interaction with brands, no research has yet been undertaken to explore the drivers of co-creation in children. This research seeks to address that gap.

Literature review

Children and brands

Children are said to have an ability to compare products, think logically and rationalise why they want them (Lwin *et al*., 2012). McNeal and Yeh (1993) suggested that this can start as early as the age of 3 months, with children able to start to request certain brands at the age of 3 years. At this age children develop a unique consumption identity (Chaplin and Roedder John, 2007), and personal brand preferences are established (Barcelos and Rossi, 2014). Later, they formulate the ability to analyse their choices (Daems *et al.*, 2019). Distinct brand related behaviours are manifest by the time they reach 7 years of age (Page *et al*., 2019) and by the age of 12 they can fully reflect on their choices and 'reason' what they might like from a product, brand or service (Roedder John, 1999). Central to this study is that children's 'reasoning' of what they like and dislike in a brand can take place in a myriad of social

situations (Jones and Glynn, 2019), as children are said to have an innate desire to disseminate their market place knowledge (Moses and Baldwin, 2005).

Co-creation

Co-creation research is dominated by empirical insights concerned with how organisations encourage and leverage brand conversations to enhance brand values and equity (Alam, 2020). France *et al.* (2015) indicated that co-creation behaviours are customer-led and are predicated on pre-existing brand relationships (Sarkar and Banerjee, 2020). These are further categorised by strong emotions and are indicative of the fact that customers are no longer satisfied as dormant partners in brand development (Sarkar and Banerjee, 2019). Customers want to embrace this new paradigm and opportunity for self-expression (Kaufmann *et al.*, 2016) and be part of an ongoing creative interaction (Kaufmann *et al.*, 2016) that ultimately provides value for them and their chosen brand. Co-creation is representative of a customer's attitude, beyond purchase, that sees them evolve into a valued relational partner and ultimately a contributor and creator (Saarijärvi *et al.*, 2013). For companies, value is created through the integrated actions of both brand and consumer that provide insight into their specific needs and wants (Pedeliento *et al.*, 2020). Lusch and Vargo (2006) explained that value is created by customers who physically supply them with solutions (Cova and Dalli, 2009) and in this process the customer is exalted (Pandey and Kumar, 2020). Thus, it is increasingly important that we understand consumers' drivers to volunteer as working consumers and become part of the brand co-creation dynamic (Cova *et al.*, 2015).

Conceptual framework: Drivers of co-creation

Personal drivers: Learning

The theoretical genesis for personal drives can be found in work relating to social capital (see Wasko and Faraj, 2005) and the work of Nambisan and Baron (2007). Nambisan and Baron

(2007) suggest that cognitive or learning benefits, or the desire to better understand "products, their underlying technologies and usage" (Nambisian and Baron's, 2007, p. 45), are central. They indicated that this type of expression was key factor in shaping why an individual might contribute to a virtual environment as it provides the individual to enhance "their expertise-related status and reputation among peer customers as well as with the product vendor" (2010, p.45). This ability to express 'know-how' (Akman *et al*., 2019) has become prevalent given its ability provide a positive experience and reward for the individual (Füller and Bilgram, 2017; Frasquet-Deltoro *et al*., 2019; Hussain *et al*., 2020).

Personal drivers- incentives

The proposition of reward is a distinct theme within the co-creation literature and, beyond the broad elements of learning and sharing, the literature cleary denotes that individuals can be driven by monetary incentives (Saarijärvi *et al*., 2013; Lusch and Nambisan, 2015). Füller (2010) suggests that incentives tend to capture individuals who are extrinsically motivated and are looking for an immediate payoff for their time and contribution. This type of drive is goal orientated, specific, pragmatic in nature (Füller, 2010) and predicated on what Baldus *et al*., (2015) refer to as utilitarian rewards that range from money, deals, merchandise, and prizes. This drive is so prevalent that Ind *et al*., (2013) suggest that managers have to adopt a "gift exchange perspective" (p. 181) when considering how to motivate consumers to engage in co-creation.

Personal drivers- pleasure and fun

Another key driver to be part of the co-creation process is that of pleasure (Blinda *et al*., 2019; Nambisan and Baron, 2009). Pleasure is derived from the interaction that virtual environments offer (Akman *et al*., 2019). Baldus *et al*., 2015 conceptualize this as a hedonic reward and it incorporates entertainment-seeking and fun (Roy, 2018). Fun is demonstrated to be an essential component of personal paradigm and is seen as a critical factor in the desire, or the drive, to

engage in co-creation activities (Blinda *et al*., 2019). Studies have demonstrated that personal drives can also encompass distinct social dimensions that may comprise the need for rapport, information sharing, providing/offering feedback, helping others, seeking feedback, and simply connecting (Akman *et al*., 2019; Dessart *et al*., 2019, Baldus *et al*., 2015; Dessart *et al*., 2015).

Social drivers

The underlying theoretical proposition for social drivers, a term derived from Akman *et al*., (2019), has its roots in the work of Ramaswamy and Gouillart (2010) and their assertion that brand platforms facilitate meaningful, relational interactions. Moreover, this section capitalises on the work of Nambisian and Baron (2007) and their study into the benefits of customer participation in a virtual customer environment.

Social drivers -shared experience

These works indicate that co-creation is a shared experience. There is an intrinsic need for participation, personal proximity, and a sense belonging (Alam, 2020; Pan, 2020), with this facilitated by a given brand (Akman *et al*., 2019). This desire for interactivity and social interaction results in a willingness to engage collectively (Jun *et al*., 2020) and is representative of a literal and metaphoric journey as consumers move towards a more collective consciousness (Akman *et al*., 2019). Brands, and those associated with them, provide strong relational (Quach *et al.,* 2020) bonds, and this, in turn, encourages co-creative activity (Rashid *et al*., 2019) and a sense of unity (Akman *et al.*, 2019).

Social drivers - shared information

Part of this social paradigm is the desire to share information. This is a dynamic interaction (Frasquet-Deltoro *et al*., 2019) as the brands, products and indeed the social elements of a given community evolve rapidly (Pandey and Kumar, 2020). Individuals are empowered to share

information (Akman *et al*., 2019) given the very nature of the virtual environment, with this in turn building long term relationships (Sarmah *et al*., 2018). Sharing is dependent on the levels of integration an individual has with a product or brand, and the value of the information shared is dependent on that. However, like the personal drivers, this social practise can underpin recognition, the need for self-expression and relationship building. However, factors like efficacy, knowledge and ability come into play (Alves and Mainardes, 2017), and as such these drivers are not exhibited by all.

Social drivers -shared experiences

The literature indicates that individuals also like to share brand-related experiences. Combining elements of 'communion and distribution' (Sthapit *et al*., 2019), experience relates to interaction with a brand and the experience of co-creation itself (Alarcón *et al*., 2017). Such experiences can be emotional (Hollebeek, 2011) and this type of sharing reflects relation dynamics (Brodie *et al*., 2011) that might be seen externally. A key conceptual difference is that discussing a brand in an explicit manner provides satisfaction (Alarcón *et al*., 2017) and is not predicated on incentives or personal gain (Gonzalez-Padron, 2017). Despite the profusion of these factors in the literature, their impact has only been empirically explored in an adult context (Akman *et al*., 2019; Kennedy and Guzmán, 2016; Nambisan and Baron, 2009; Quach *et al*., 2020).

Methodology

Event diaries were utilised for data collection since they allow for spontaneous data collection (Bolger *et al*., 2003). Diaries provide the researcher with the opportunity to investigate everyday situations (Bolger *et al*., 2003) and are useful for empirically capturing change (Elliott, 1997), lived experiences (Radcliffe, 2013) and 'true' behaviours (Alaszewski, 2006).

An 'electronic' approach (Bolger *et al*., *2*003) was implemented, given the advocacy that this approach offers advantages relating to data entry, management, and accuracy.

Pilot study

Having obtained institutional ethics approval, a pilot test was undertaken consisting of a four-week diary experiment. Morrison *et al*. (2016) suggested that pilot studies are essential in defining and refining strategies, and given this, a pilot was instigated. Replicating work by Durl *et al*. (2017), the study recruited children from four British primary schools (all based in Wales, UK). Following Deriemaeker *et al*. (2007), an 'open letter' was sent to the schools outlining what would be undertaken and why. Consent was obtained from parents and the school, along with assent from the children involved. Twenty-one children (8 male, 13 female) took part in the pilot study. Following the work of Thomas and O'Kane (1998) and Alderson and Morrow (2011), an information pack was provided for all participants. Within these information packs were instructions for parents and a breakdown of what co-creation is, based on the work of Lusch and Vargo (2006).

The "effectiveness of diary study designs depends on careful consideration of the question(s) one seeks to answer" (Bolger *et al*., 2003, p. 581), and consequently, respondents, were simply asked to 'write down' and 'show' in the electronic diaries 'when' they had communicated with a brand, 'what' they had 'communicated' to that brand, and 'why' they communicated with that brand. They were told not to consider previous occasions or reasons for purchase, but only new interactions and engagements that reflected the period of the research. They were advised that they could record anything they wanted, and we were only interested in their journey with a given brand. We also clarified that this was not for school, and spelling and grammar would not be an issue. Additionally, they were told not to record their names, school or where they lived. These instructions were aimed at understanding the contexts of the potential drivers of

co-creation without leading the individuals involved. This four-week period generated 146 electronic entries, an average of six per participant, and only one child failed to provide an entry. Given the success of the pilot study, the framework was carried into the main data collection verbatim.

Main data collection

The main data collection process followed the pilot explicitly. Schools were identified from the UK Government Department for Education, the Welsh, Scottish and Northern Irish Governments, the Office for National Statistics (ONS) and Office for Standards in Education, Children's Services and Schools (Ofsted) data. A convenience sampling method was employed utilising the UK's largest cities to facilitate this. The 'open letter' invitation resulted in 638 parental acknowledgements that their child could be involved, with 463 children (296 male and 167 female) participating in the final 18-month data collection (244 came from English schools, 109 from Welsh schools, 92 from Scottish schools and 43 from Northern Ireland). The age range involved was 7–13 years, with a M_{age} of 12 for female and M_{age} of 11 for male participants.

There was no direct contact with the participants and all diary entries were sent to am anonymous email address specifically set up for this research purpose. The diary entries were requested at the end of each month, following Bolger *et al.,* (2003) and their notion of a fixed schedule approach. On receipt of the entries, and capitalising on a framework developed by Penz and Kirchler (2016), letters were sent to parents at the end of each month to be passed on to their children thanking them for their contribution and reemphasising the importance of the data that the children were providing.

Analysis

The study generated 2,631 meaningful diary entries, an average of 5 per participant over the 18-month period. Entries were forwarded every month and analysis of the completed entries took place upon receipt. The average diary entry was 116 words, with the shortest 26 and the longest 218. Content analysis was applied to the diary entries. The initial reading of the diary entries was undertaken against the backdrop of what is known about personal and social drives to engage in co-creation, but codes emerged from the data set in an inductive manner. This study employed three raters, and Kappa was calculated as K=0.66. According to Fleiss *et al*., (2003) this represents 'good' agreement, and according to Landis and Koch (1977), 'substantial' agreement. Where they were disagreements in relation to the coding, the team introduced a fourth coder (a highly experienced faculty member) and a 'majority rules' approach as identified in the work by O'Connor and Joffe (2020) was implemented.

Findings

The findings of this paper are presented to reflect the three major themes that developed during analysis.

Maintaining external relationships

A theme that was exclusively female in origin was the drive to engage in co-creation in order to fit in with existing external social groups. A total of 146 diary entries (6% of diary extracts), generated by 92 participants, revealed that leaving ideas exclusively for clothing brands helped maintain external friendships. Of the 146 entries, 56 (28%) were repeat entries, indicating that this was a normative behaviour for some. Leaving ideas is seen as a central construct in co-creation (Bayus, 2013), but it was apparent that leaving ideas (the word 'idea' or related synonyms featured in 123 of the 146 extracts) in this context was not part of a desire to engage in brand collaboration but driven as a means of maintaining pre-existing friendships. None of the 146 entries indicated a pre-existing relationship with the brand and the emphasis was on

leaving ideas to indicate a bond to facilitate friendships that might be seen by a relevant third party, as seen in the extract below:

I don't like Champion [American sportswear company] *or Ellesse* [Italian Sportswear company] *but I've left some ideas for them for them. Jasmine will see that I've done that, and it will make us closer.* [P92, Female, age 11]

The desire to engage in co-creation was also seen as a way of mimicking, complimenting, or underpinning a third party's perception of them, and this is continued in the following extracts:

Poppy has been on all week about Juvenal [online US leisure brand] *so I leave a post licking* [sic] *it and leave an idea for a t-shirt that used brighter colours. Were* [sic] *good now as I've done what she did, pffffffffffffffff.* [P12, Female, age 12]

It wasnt [sic] *about the people on the site getting back or whatever, but about keeping Olivia happy saying "OFC* [abbreviation for 'of course'] *I like it and* [your] *ideas". It's like a 121 thing so it doesn't get awks* [UK slang term for awkward]. [P315, Female, age 12]

In the above we see that these activities were not about social interaction within a community, but their internal and immediate environments and enhancing a sense of belonging to that group. P315 clearly articulates that "*It wasnt* [sic] *about the people on the site getting back or whatever…*" and in the initial coding, this and another 102 extracts were coded as code 'LA', or lacking authenticity in relation to what is known theoretically. To further illuminate this, word clouds were created during analysis to and they revealed the repetition of the word 'friendship' (n=49), 'mates' (n=22) and 'homegirl' (n=13). We therefore concluded that external social relationships were key drivers for engaging in co-creation for some children.

Addiction

A major theme in the findings was that of addiction to the co-creation process. A total of 463 entries (17% of all the diary extracts) suggested that participating in virtual co-creation activity

was a constant activity with a level of dependency. Of the 463 entries, 288 (62%) were from female participants and 175 (38%) from male participants. Analysis revealed a median age of 13 for those leaving articulating this drive. It was revealed that these behaviours shared addiction properties in that they were repetitious, habitual and pleasure-inducing and were carried out until a certain response was achieved. This is indicated in the extract below:

I just can't stop doing it. I'm not fussed about the brands, or really what they'll do but if I don't do it, I feel like I'm going a bit mad. It's really satisfying to give a suggestion and get that feedback. If I don't get it [feedback] *I'll just keep on offering nonsense until I do.* [P130, Male, age 13]

I've been leaving ideas this week; I like to do it, so it was weird not to. This week I've left some feedback for a "sold out hoodie" for "AntiSocialSocialClub" [online apparel brand]. *There* [sic] *always sold out so I thought that would be good. Felt better for doing it as I hadn't done that for a while, and I really wanted to do it.* [P13, Male, age 13]

The above extracts, and others like it, denote a compulsion rather than an impulse to leave what were seemingly arbitrary contributions. For example, one participant, a 12-year-old female, provided 19 entries, with the following representative of those entries:

I had an itch today so told Kappa to make some American Horror story shoes, cause [sic] *it was the maddest thing I could think of. I just do it all the time…* [P13, Female, age 12].

In analysis, the above and similar behaviours were coded as 'personal urge' (n=26), 'avoiding withdrawal' (n=23), 'dependence' (n=26), 'preoccupation' (n=11) and 'satisfaction' (n=21). It was clear that there was a uniformity to these behaviours, with certain participants regularly, as outlined above, forwarding diary entries containing multiple examples of co-creation engagement that provided a dialogue of brand experiences. Additionally, these behaviours were

associated with what was coded as 'thrill' (*n*=32), 'delight' (*n*=14) and 'buzz' (n=15), with some participants even taking huge delight in the process, as captured below:

I love doing it, makes me feel good. I'm the GOAT [greatest of all time] *at doing it, I'm lit* [UK slang for awesome] *when it comes to this*. [P239, Male, age 13]

From this it was clear that mood, or perhaps the maintenance of a mood, was also associated with co-creation.

Once I've left something for a brand, commented on other posts or given some feedback I feel really, really good. And I think that's why I do it, it just makes me feel good and because of that I keep doing it and then sending these thoughts to you [P140, Male, age 13]

The extract above, and others like it, pointed to the drive of experiential pleasure that individuals were getting from constantly posting on brand sites. It suggests that co-creation provides a certain aesthetic for these young consumers and generates a particular that can only be slaked by constantly being part of an ongoing narrative online. It was not clear whether this was novelty, but it was considered that despite the random nature of these interactions, it could enhance a brand's perception.

Loneliness

A total of 252 entries (9% of the total) indicated that the aetiology of co-creation behaviours was loneliness. Of the 252 extracts, 53% indicated that the drive to engage co-creation activities was to counter the impact of familial upheaval. This is captured in the extract below:

Dad doesn't have that much time for us anymore, so this morning and this afternoon I've been leaving ideas for Modern Warfare [first-person video game] *and Nike for next season's kit.* [P429, Male, age 11]

During initial analysis, extracts like this this were coded as 'Filling the Void (FTV). In further discussion and in terms of finding distinct categories, similar extracts were grouped together under the category 'Reliable Social Interaction' (RSI) as it became clear that that co-creation was evaluated as a 'reliable' social partner that assisted with the attunement to change, offering unconditional inclusion beyond the milieu of homelife and social life, and this is further illuminated below:

Today is Wednesday and nobody's really bothered with me all weeks [sic]*, feel a bit shitty about that, so I've started to get involved with designing a few thinks* [sic] *online about WRC8* [driving game for Nintendo] *as I know I'll get feedback and have some conversations about what I've said.* [P310, Male, age 12]

Interestingly, the extract above, and 67 diary entries like it, were provided by male participants; only 12 came from female participants. Moreover, those involved in co-creation offered a virtual support group for many of these male participants, with the affiliating aspect paramount. Consequently, co-creation offered a 'reliable' discourse to fill an articulated void that had little or nothing to do with a brand as indicated below:

Like you asked, I've though a lot about why I did this today, and it's the same as last time. I just want to have a chat as with everything that's going on, I'm feeling a bit lost. I don't care about the brand, but it's a massive community [My Starbucks idea]*, and I knew someone would comment and get back to me.* [P416, Male, age 13]

Given the profundity in entries like this, the data highlights the importance of co-creation beyond adding value to a brand and the positive impact that forums, etc., can have on these young lives.

Discussion

Maintaining external relationships (personal and social drives)

For 92 female children in this study, it was external relationships rather than internal, community-based brand relationships that drove co-creation activity. In this we have the first tangible difference between child and adult co-creation behaviour. What was going on in a brand community was unimportant, and the traditional elements (Akman *et al*., 2019; Nambisan and Nambisan, 2008), such as internal interconnectivity were missing. Offering a synergy with the work of Nambisan and Nambisan (2008), we can see both personal and social drivers within this context. Extracts indicated that participants, through co-creation, wanted to enhance personal status and perceptions as well as consolidate their social positions within their immediate social groups, it was even considered that co-creation could mitigate for social rejection. From a purely social perspective, the data indicated that co-creation might be driven by social anxiety about their status within external friendship groups. The extant body of literature on co-creation has not empirically presented that peer pressure or external pressures generally might drive co-creative behaviours. This will need to be established further. However, we do know that peer pressure is an important issue for children and adolescents (Gil *et al*., 2017), and it might be so in the context of co-creation. It is clearly important for this group that being seen to visibly engage with a brand and contribute to communities that reflect collective preferences can present or propagate a more positive self-image. Co-creation, in this context, is posited as an adaptive exchange mechanism to facilitate or strengthen key interpersonal relationships, and we have revealed this for the first time.

Addiction (personal drivers)

The data set relating to addiction offers some synergy with the work on personal drivers and the fun aspects derived from it. In the data we clearly see pleasure being derived from engagement. However, we believe that what was being articulated in the diary extracts went beyond fun, as described by Roy (2018). What was apparent was a lack of self-control,

obsession, and persistence: alarmingly, these are three of the 11 attributes that Mrad and Cui (2017) associated with brand addiction. What may have started as genuine personal drive has transcended traditional needs for rapport, feedback, collaboration and information sharing (Akman *et al*., 2019) and entered a different domain where the act itself rather than the purpose of the act drives engagement. We believe that the idea that co-creation can be addictive is novel and is predicated on the personal drivers of the need to have communication with others. Sadly, the data does not reveal whether the strategies were successful, but we posit that this behaviour will be facilitated by smartphone/internet addiction. Lu and Wang (2008) and Kim *et al*. (2018) suggest that 'youth' are particularly vulnerable to this, and 'phones' are a major force in the manifestation of 'mindless habits and traits' that are 'deleterious'.

Loneliness (personal and social drives)

We believe that this has a conceptual link to traditional social drives to engage in co-creation and specifically social interaction opportunities and rapport building. However, despite this synergy, at the time of writing no empirical sources have revealed that the co-creation drivers might be related to loneliness. To date, only Snyder and Newman (2019) have suggested that brand community could negate loneliness for adult consumers, but not actual acts of co-creation. Having said that, loneliness in children has been a generative area of research (see Goossens and Beyers, 2002; Lim and Kim, 2011), but with an emphasis on causation (peer rejection, eating disorders, insomnia, depression, low self-esteem) rather than resolution. Co-creation offers a means of mitigating for alienation, social isolation, and a genuine sense of powerlessness when it came to social interaction. For these children who found themselves outside a dominant or cohesive group, we see co-creation linked to the need for attachment a distinct social drive. Again, this offers some synergy with the adult literature, but the drivers themselves stem from a far more profound place. Rather than simple belonging, this is about anxiety avoidance and, importantly, closeness and coping with clear distress in what has been

deemed to be the most constructive way. Co-creation in this context can therefore be posited as an active coping agent that has little or nothing to do with brand involvement or attachment, and we believe this is unique.

Theoretical significance

This study contributes to existing theory by further extending the understanding of the differing drivers of the phenomenon of co-creation and highlights that children and adults exhibit different drivers when it comes to social and personal drives. Further to understanding the initial drivers of co-creation, the work also provides insights into the social factors that drive individuals into a brand community to engage in co-creation. Moreover, the work provides greater insight into the individual factors that drive co-creation and adds a layer of further understanding to the seminal work of Nambisan and Baron (2007). Of additional interest is that the data indicates gender-specific behaviours when it comes to co-creation.

Managerial implications

Broadly the data suggests that for this group emotional value was at the heart of why they were driven to engage in co-creation. Importantly as well, we see an overlap in these drives as indicated in Figure 1.

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But it should be considered that it was external emotions that drove them and not the need itself for engaging with a brand itself. This is an important distinction managerially as it is not associated with the traditional personal and social drives that permeate the literature.

Authenticity

Given that the work deals with children, direct managerial insight into decision-making is problematic, as ethics would prevent direct contact; hence, we look at some concerns that managers might consider going forward. Managers should be mindful that some of the 'ideas' generated within brand communities might not be fully authentic, given the relationship with co-creation and external pressures, addiction and social loneliness identified in this paper. The issue for managers, particularly with new product development (NPD), is show to filter ideas. The clearest method of filtering out these arbitrary contributions is to establish congruity. By the participants' own admission their 'contributions' were ad hoc, arbitrary and, from the tone of many of the extracts, insouciant. To that end, contributions like this may not fit into collective narratives and may well seem anomalous. From an analysis of the diary extracts, particularly those with addiction tendencies, co-creative dialogues would potentially be proself rather than prosocial, a potential hallmark of authentic engagement. It is also worth considering that these types of contribution would be void of high-performance insight and resonant with brand knowledge.

Addiction

Given the possible indications of addiction in our data, managers should be mindful of the implications of strong reciprocity. While this may seem counterintuitive given the paradigm under evaluation, such reciprocity may add to the addiction. Brand managers should be mindful that interaction could lead to behavioural maladaptation and result in more, potentially inauthentic, collaborative instances that could be strategically detrimental.

Loneliness

Loneliness is conceptualised as the experience and individual experiences a deficiency in their social relationships (Perlman and Peplau, 1982) and the data indicates that brand-owned forums allow individuals to use co-creation as an escape from loneliness. Despite the profundity in

this, managerially, such actions could enhance brand relationships and associations. There is the potential for relationships to be nurtured through these interactions, and potentially routinised. However, this is a highly complex situation and potentially beyond the realms of management per se, given the ethical constraints and, frankly, the inability to identify a lonely individual without specific questioning. Intervention is therefore an almost impossible task. Nevertheless, being mindful of the fact that communities and co-creation offer significant opportunity for children to counter their domestic situations , such activity could promote more brand-based dialogue and facilitate more brand-related activities within a community. Brand relationships and authentic interactions might be nurtured through these interactions and could result in routinised co-creative activities that reflect the more traditional frameworks that brand managers have come to rely on.

Parental implications

The work advocates a far stronger parental role in the monitoring of children's online behaviour. None of the diary extracts revealed a parental intervention or, indeed, parental interest in this activity, and given some of the implications, this was stark and potentially indicative of a lack of awareness.

Societal/regulatory implications

It is paramount that brands do more to monitor discourse, syntax and frequency of co-creative behaviour considering the behaviours revealed in this study. Early screening of multiple posts and potentially tagging could help identify issues. Given that the data almost exclusively indicated that co-creation is a social media phenomenon for children, the capacity for individuals to enter chatrooms, target individuals and develop erroneous trust-based relationships is a real issue. Age-appropriate settings need to be enforced far more rigorously,

and large pan-cultural bodies like the European Commission and its 'Safer Internet Programme' should be exploring this phenomenon.

Limitations

The research presented in this paper has limitations. The participants are culturally situated in the UK; there may be instances of participants knowing each other, attending the same school or sharing classes and therefore consciously influencing one another. Given the nature of the issues raised in the data, it would have been preferable to have explored them more fully, perhaps through a focus group, but the very nature of the diary approach negates that opportunity. Moreover, the diary method is a continual approach that demands participant commitment, and it is possible that not all participants recorded or reflected on each act of co-creation in which they engaged. It is also conceivable that entries may simply have been created for the sake of compliance and that, too, has to be factored in.

Future research

The paper does offer significant opportunity for future research, and drivers identified here need to be further investigated to explore their prevalence and relevance. There is also scope for exploration of the gender-specific aspects identified in the data. Given the limited sample in this paper, we would advocate the continued use of qualitative frameworks, but would endorse a move towards focus groups to mitigate for the acknowledged issues with diary-type investigations.

Conclusions

The findings of this study suggest that for some children the drivers of co-creation activity are motivated by a myriad of external factors rather than an existing relationship with a brand. There are strong personal and social drivers, but they are not traditional in the context of the existing literature. For some within this age group, co-creation is a means to navigate,

ameliorate and dissipate social ills and personal issues. It is an act that is representative of a contribution and creation, but these elements are externally focused offer new empirical insight into the nascent paradigm of co-creation.

References

Alarcón López, R., Ruiz de Maya, S. and López López, I. (2017), "Sharing co-creation experiences contributes to consumer satisfaction", *Online Information Review*, Vol. 41 No. 7, pp. 969-984.

Agante, L. and Pascoal, A. (2019), 'How much is "too much" for a brand to use an advergame with children?', *Journal of Product and Brand Management,* Vol. 28 No. 2, pp. 287–299.

Akman, H., Plewa, C. and Conduit, J. (2019), 'Co-creating value in online innovation communities', *European Journal of Marketing,* Vol. 53 No. 6, pp. 1205–1233.

Alam, S.L. (2020), 'Many hands make light work: towards a framework of digital co-production to co-creation on social platforms', *Information Technology & People*, Vol. ahead-of-print No. ahead-of-print.

Alaszewski, A. (2006) *Using Diaries for Social Research.* London: Sage.

Alderson, P. and Morrow, V. (2011), *The Ethics of Research with Children and Young People: A Practical Handbook*. London: Sage.

Alves, H. and Wagner Mainardes, E. (2017), "Self-efficacy, trust, and perceived benefits in the co-creation of value by consumers", *International Journal of Retail & Distribution Management*, Vol. 45 No. 11, pp. 1159-1180.

Baldus, B.J., Voorhees, C. and Calantone, R. (2015), "Online brand community engagement: scale development and validation", *Journal of Business Research*, Vol. 68 No. 5, pp. 978-985.

Barcelos, R.H. and Rossi, C.A.V. (2014), 'Paradoxes and strategies of social media consumption among adolescents', *Young Consumers* Vol. 15 No. 2, pp. 275–295.

Bayus, B.L. (2013), "Crowdsourcing new product ideas over time: an analysis of the Dell IdeaStorm community", *Management Science*, Vol. 59 No. 1, pp. 226-244.

Bazi, S., Hajli, A., Hajli, N., Shanmugam, M. and Lin, X. (2019), 'Winning engaged consumers: The rules of brand engagement and intention of co-creation in social commerce', *Information Technology and People,* Vol. 33 No. 2, pp. 456–476.

Bevelander, K.E., Kwakernaak, L., Laset, E, Zeinstra, G. and Molleman, G. (2019), 'Placing healthy kids meals on the restaurant menu by co-creation between chef-cooks and children', *European Journal of Public Health*, Vol. 29 No. 4, pp. 369.

Blinda, K., Schnittka, O., Sattler, H. and Gräve, J. (2019), 'Implementing effective customer participation for hedonic and utilitarian services', *Journal of Services Marketing*, Vol. 33 No. 3, pp. 316–330.

Bolger, N., Davis, A. and Rafaeli, E. (2003), 'Diary methods: capturing life as it is lived', *Annual Review of Psychology*, Vol. 54, pp. 579–616.

Breive, S. (2020), 'Student–teacher dialectic in the co-creation of a zone of proximal development: an example from kindergarten mathematics', *European Early Childhood Education Research Journal*, Vol. 28 No. 3, pp. 413–423.

Brodie, R.J. , Hollebeek, L.D. , Juric, B. and Ilic, A. (2011), "Customer engagement: conceptual domain, fundamental propositions, and implications for research", *Journal of Service Research* , Vol. 14 No. 3, pp. 252-271.

Catala, A., Sylla, C., Theune, M., Brooks, E. and Read, J.C. (2018), 'Rethinking children's co-creation processes beyond the design of TUIs', IDC '18: Proceedings of the 17th ACM Conference on Interaction Design and Children June 2018, pp. 733–740, available at https://doi.org/10.1145/3202185.3205870 (accessed 28 October 2020).

Chaplin, L.N. and Roedder John, D. (2007), 'Growing up in a Material World: Age Differences in Materialism in Children and Adolescents', *Journal of Consumer Research*, Vol. 34 No. 4, pp. 480–493.

Cheung, M.F.Y. and To, W.M. (2020), 'The effects of customer involvement on perceived service performance and word-of-mouth: the mediating role of service co-creation', *Asia Pacific Journal of Marketing and Logistics,* Vol. ahead-of-print No. ahead-of-print.

Clement, J. (2019), 'Spatially Democratic Pedagogy: Children's Design and Co-Creation of Classroom Space', *IJEC*, Vol. 51, pp. 373–387.

Cova, B. and Dalli, D. (2009), 'Working Consumers: The Next Step in Marketing Theory?', *Marketing Theory,* Vol. 9 No. 3, pp. 315–339.

Cova, B., Pace, S. and Skalen, P. (2015), 'Brand volunteering: value co-creation with unpaid consumers', *Marketing Theory,* Vol. 15 No. 4, pp. 465–485.

Crosby S., Younie, S., Williamson, I. and Laird, K. (2020), 'Evaluating approaches to designing effective co-created hand-hygiene interventions for children in India, Sierra Leone and the UK', *PLOS ONE*, Vol. 15 No. 9, available at https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0239234

Daems, K., De Keyzer, F., De Pelsmacker, P. and Moons, I. (2019), 'Personalized and cued advertising aimed at children', *Young Consumers*, Vol. 20 No. 2, pp. 138–151.

Daems, K., Moons, I. and De Pelsmacker, P. (2017), 'Co-creating advertising literacy awareness campaigns for minors', *Young Consumers*, Vol. 18 No. 1, pp. 54–69.

Deriemaeker, P., Taeymans, J., Aerenhouts, M., Hebbelinck, M. and Clarys, P. (2007), 'Nutritional intake and physical performance capacity in Flemish schoolchildren (seven to 12 years): issues for responsible marketing', *Young Consumers*, Vol. 8 No. 2, pp. 83–93.

Dessart, L., Aldás-Manzano, J. and Veloutsou, C. (2019), 'Unveiling heterogeneous engagement-based loyalty in brand communities', *European Journal of Marketing*, Vol. 53 No. 9, pp. 1854–1881.

Dessart, L., Veloutsou, C. and Morgan-Thomas, A. (2015), 'Consumer engagement in online brand communities: a social media perspective', *Journal of Product and Brand Management*, Vol. 24 No. 1, pp. 28–42.

Durl, J., Trischler, J. and Dietrich, T. (2017), 'Co-designing with young consumers – reflections, challenges and benefits', *Young Consumers*, Vol. 18 No. 4, pp. 439–455.

Elliott, H. (1997), 'The use of diaries in sociological research on health experience', *Sociological Research Online*, Vol. 2 No. 2, pp. 1–11.

Eng, B. and Jarvis, C.B. (2020), 'Consumers and their celebrity brands: how personal narratives set the stage for attachment', *Journal of Product & Brand Management*, Vol. 29 No. 6, pp. 831–847.

Fleiss, J., Levin, B. and Paik, M. (2003), *Statistical Methods for Rates & Proportions*, 3rd ed., Wiley & Sons, New York.

Flurry, L.A., Swimberghe, K.R. and Parker, J.A. (2014), "Examining brand communities among children and adolescents: an exploratory study", *Journal of Consumer Marketing*, Vol. 31 No. 2, pp. 103-110.

Folkvord, F., Bevelander, K., Rozendaal, E. and Hermans, R. (2019), 'Children's bonding with popular YouTube vloggers and their attitudes toward brand and product endorsements in vlogs: an explorative study', *Young Consumers*, Vol. 20 No. 2, pp. 77–90.

France, C., Grace, D., Merrilees, B. and Miller, D. (2018), 'Customer brand co-creation behavior: conceptualization and empirical validation', *Marketing Intelligence and Planning*, Vol. 36 No. 3, pp. 334–348.

France, C., Merrilees, B. and Miller, D. (2015), 'Customer brand co-creation: A conceptual model', *Marketing Intelligence and Planning*, Vol. 36 No. 6, pp. 848–864.

Frasquet-Deltoro, M., Alarcón-del-Amo, M. and Lorenzo-Romero, C. (2019), 'Antecedents and consequences of virtual customer co-creation behaviours', *Internet Research*, Vol. 29 No. 1, pp. 218–244.

Füller, J. and Bilgram, V. (2017), 'The moderating effect of personal features on the consequences of an enjoyable co-creation experience', *Journal of Product & Brand Management*, Vol. 26 No. 4, pp. 386–401.

Gil, L., Dwivedi, A. and Johnson, L. (2017), 'Effect of popularity and peer pressure on attitudes toward luxury among teens', *Young Consumers*, Vol. 18 No.1, pp. 84–93.

Gonzalez-Padron, T.L. (2017), "Ethics in the sharing economy: creating a legitimate marketing channel", *Journal of Marketing Channels*, Vol. 24 Nos 1/2, pp. 84-96.

Goossens, L. and Beyers, W. (2002), 'Comparing measures of childhood loneliness: Internal consistency and confirmatory factor analysis', *Journal of Clinical Child Psychology*, Vol. 33 No. 2*, pp. 252–262.

Handa, M. and Ahuja, P. (2020), 'Disconnect to detox: a study of smartphone addiction among young adults in India', *Young Consumers*, Vol. 21 No. 3, pp. 273–287.

Helme-Guizon, A. and Magnoni, F. (2019), 'Consumer brand engagement and its social side on brand-hosted social media: how do they contribute to brand loyalty?', *Journal of Marketing*, Vol. 35 No. 7–8, pp. 716–741.

Hollebeek, L.D. (2011), "Demystifying customer brand engagement: exploring the loyalty nexus", *Journal of Marketing Management* , Vol. 27 No. 7, pp. 785-807.

Huijnen, C.A.G.J., Lexis, M.A.S., Jansens, R., and de Witte, L.P. (2017), 'How to Implement Robots in Interventions for Children with Autism? A Co-Creation Study Involving People with Autism, Parents and Professionals', *Journal of Autism and Developmental Disorders*, Vol. 47 No. 10, pp. 3079–3096.

Hussain, K., Jing, F., Junaid, M., Zaman, Q.U. and Shi, H. (2020), 'The role of co-creation experience in engaging customers with service brands', *Journal of Product & Brand Management*, Vol. ahead-of-print No. ahead-of-print.

Jones, K. and Glynn, M. (2019), 'How children use social media for brand interactions', *Young Consumers*, Vol. 20 No. 2, pp. 91–108.

Jun, F., Jiao, J. and Lin, P. (2020), "Influence of virtual CSR gamification design elements on customers' continuance intention of participating in social value co-creation: The mediation

effect of psychological benefit", *Asia Pacific Journal of Marketing and Logistics*, Vol. 32 No. 6, pp. 1305-1326.

Kaufmann, H., Loureiro, S. and Manarioti, A. (2016), 'Exploring behavioural branding, brand love and brand co-creation', *Journal of Product and Brand Management*, Vol. 25 No. 6, pp. 516–526.

Kennedy, E. and Guzmán, F. (2016), 'Co-creation of brand identities: consumer and industry influence and motivations', *Journal of Consumer Marketing*, Vol. 33 No. 5, pp. 313–323.

Kim, K., Milne, G. and Bahl, S. (2018), 'Smart phone addiction and mindfulness: an intergenerational comparison', *International Journal of Pharmaceutical and Healthcare Marketing,* Vol. 12 No. 1, pp. 25–43.

Landis, J.R. and Koch. G.G (1977), 'The Measurement of Observer Agreement for Categorical Data', *Biometrics*, Vol 33 No. 1, pp. 159-174.

Lu, H.P. and Wang, S.M. (2008), 'The role of internet addiction in online game loyalty: an exploratory study', *Internet Research*, Vol. 18 No. 5, pp. 499–519.

Lusch, R.F. and Nambisan, S. (2015), 'Service innovation: a service-dominant logic perspective', *MIS Quarterly*, Vol. 39 No. 1, pp. 155–175.

Lusch, R.F. and Vargo, S.L. (2006), 'Service-dominant logic: reactions, reflections and refinements', *Marketing Theory*, Vol. 6 No. 1, pp. 281–288.

Lwin, M., Miyazaki, A., Stanaland, A. and Lee, E. (2012), 'Online usage motive and information disclosure for preteen children', *Young Consumers*, Vol. 13 No. 4, pp. 345–356.

McNeal, J.U. and Yeh, C.H. (1993), 'Born to shop', *American Demographics*, June, pp. 34–39.

Morrison, J., Clement, T., Nestel, D. and Brown, J. (2016), '"Underdiscussed, underused and underreported": pilot work in team-based qualitative research', *Qualitative Research Journal*, Vol. 16 No. 4, pp. 314–330.

Moses, L.J. and Baldwin, D.A. (2005), 'What can the study of cognitive development reveal about children's ability to appreciate and cope with advertising?', *Journal of Public Policy and Marketing*, Vol. 24 No. 2, pp. 186–201.

Mrad, M. and Cui, C. (2017), 'Brand addiction: conceptualization and scale development', *European Journal of Marketing*, Vol. 25 No. 11–12, pp. 1938–1960.

Nairn, A., Griffin, C. and Wicks, P.G. (2008), "Children's use of brand symbolism: A consumer culture theory approach", *European Journal of Marketing*, Vol. 42 No. 4/6, pp. 627-640

Nambisan, S. and Baron, R.A. (2007), 'Virtual Customer Environments: Testing a Model of Voluntary Participation in Value Co-creation Activities', *Journal of Product Innovation Management*, Vol. 26, pp. 388–406.

Nambisan, S. and Nambisan, P. (2008), 'How to profit from a better online customer environment', *MIT Sloan Management Review*, Vol. 49 No. 3, pp. 53–61.

Novlianskaya Z.N. (2020), 'Co-Creation of Understanding. On a Literature Course in the Developmental Education System', *Psychological Science and Education*, Vol. 25 No. 4, pp. 71–80.

O'Connor, C. and Joffe, H. (2020), Intercoder Reliability in Qualitative Research: Debates and Practical Guidelines, *International Journal of Qualitative Methods,* Vol 19, pp. 1–13

Page, B., Sharp, A., Lockshin, L. and Sorensen, H. (2019), Using the Eyberg Child Behaviour Inventory to Investigate Pester Power, *Journal of Retailing and Consumer Services*, Vol. 47, pp. 265-271.

Pan, H. (2020), 'Online Community Value Co-creation: Differences in Firms' Strategies and Moderating Conditions', *Online Information Review*, Vol. 44 No. 3, pp. 645–669.

Pandey, S. and Kumar, D. (2020), "Customer-to-customer value co-creation in different service settings", *Qualitative Market Research*, Vol. 23 No. 1, pp. 123-143.

Paracha, S., Hall, L., Clawson, K., Mitsche, N. and Fatima, J. (2019), 'Co-design with Children: Using Participatory Design for Design Thinking and Social and Emotional Learning', *Open Education Studies*, Vol. 1 No. 1, pp. 267–280.

Pedeliento, G., Andreini, D. and Veloutsou, V. (2020), ' Brand community integration, participation and commitment: A comparison between consumer-run and company-managed communities', *Journal of Business Research*, In Press.

Penz, E. and Kirchler, E. (2016), "Households in international marketing research: Vienna Diary Technique (VDT) as a method to investigate decision dynamics", *International Marketing Review*, Vol. 33 No. 3, pp. 432-453.

Peplau, L.A. and Perlman, D. (1982), Loneliness: A Sourcebook of Current Theory, Research, and Therapy, Wiley, New York, NY.

Quach, S., Shao, W., Ros, M. and Thaichon, P. (2020), 'Customer participation in firm-initiated activities via social media: Understanding the role of experiential value', *Australasian Marketing Journal*. In Press.

Radcliffe, L. (2013), 'Qualitative diaries: uncovering the complexities of work-life decision-making', *Qualitative Research in Organizations and Management*, Vol. 8 No. 2, pp. 163–180.

Rashid, Y., Waseem, A., Akbar, A.A. and Azam, F. (2019), 'Value co-creation and social media: A systematic literature review using citation and thematic analysis', *European Business Review*, Vol. 31 No. 5, pp. 761–784.

Roberts, D., Hughes, M. and Kertbo, K. (2014), "Exploring consumers' motivations to engage in innovation through co-creation activities", *European Journal of Marketing*, Vol. 48 No. 1/2, pp. 147-169.

Roedder John, D. (1999), 'Consumer socialization of children: a retrospective look at twenty-five years of research', *Journal of Consumer Research*, Vol. 26 No. 3, pp. 183–213.

Roy, S. (2018), 'Effects of customer experience across service types, customer types and time', *Journal of Services Marketing*, Vol. 32 No. 4, pp. 400–413.

Saarijärvi, H., Kannan, P.K. and Kuusela, H. (2013), 'Value co-creation: Theoretical approaches and practical implications', *European Business Review*, Vol. 25 No. 1, pp. 6–19.

Sarkar, S. and Banerjee, S. (2019), 'Brand co-creation through triadic stakeholder participation: A conceptual framework based on literature review', *European Business Review*, Vol. 31 No. 5, pp. 585–609.

Sarkar, S. and Banerjee, S. (2020), 'Brand co-creation through participation of organization, consumers, and suppliers: an empirical validation', *Journal of Product & Brand Management*, Vol. ahead-of-print No. ahead-of-print.

Sarmah, B., Kamboj, S. and Kandampully, J. (2018), "Social media and co-creative service innovation: an empirical study", *Online Information Review*, Vol. 42 No. 7, pp. 1146-1179

Sharma, R., Dasgupta, M. and Prashar, A. (2020). 'Does Parental Co-creation Impacts Perceived Value? A Mixed-method Study in Indian Elementary Educational Innovations', *Vision*, Vol. 24 No. 1, pp. 90–100.

Sharma, S., Conduit, J. and Rao Hill, S. (2017), 'Hedonic and eudaimonic well-being outcomes from co-creation roles: a study of vulnerable customers', *Journal of Services Marketing*, Vol. 31 No. 4/5, pp. 397–411.

Slingerland, G., Lukosh, S. and Brazier, F. (2020), 'Engaging Children to Co-create Outdoor Play Activities for Place-making', paper presented at PDC '20: Proceedings of the 16th Participatory Design Conference 2020, available at https://doi.org/10.1145/3385010.3385017 (accessed 28 October 2020).

Snyder, D. and Newman, K. (2019), 'Reducing consumer loneliness through brand communities', *Journal of Consumer Marketing*, Vol. 36 No. 2, pp. 337–347.

Thomas, N. and O'Kane, C. (1998), 'The ethics of participatory research with children', *Children and Society*, Vol. 12 No. 50, pp. 336–348.

Thomas, R. (2018), 'Mapping the perceptions and antecedents of football fans' co-creation behaviours with sponsoring brands: a pan-cultural study of the European leagues', *Journal of Marketing Management*, Vol. 34 No. 17–18, pp. 1470–1502.

Thomas, R.J., White, G.R.T. and Samuel, A. (2020), "Exploring children's reactions to sponsorship transition: a study of interpersonal and pro-social demands", *Young Consumers*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/YC-06-2020-1174

Trischler, J., Pervan, S. and Scott, D. (2017), 'Exploring the "black box" of customer co-creation processes', *Journal of Services Marketing*, Vol. 31 No. 3, pp. 265–280.

Verleye, K. (2015), 'The co-creation experience from the customer perspective: its measurement and determinants', *Journal of Service Management*, Vol. 26 No. 2, pp. 321–342.

Veloutsou, C. and Black, I. (2020), 'Creating and managing participative brand communities: the roles members perform', *Journal of Business Research*, Vol. 117, pp. 873-885.

Whelan, E., Anderson, K. and Mitchell, D. (2015), 'Occupational Therapy: Co-creation for child health, early intervention and health literacy', *British Journal of Occupational Therapy*, Vol. 78, pp. 76–77.

Xiao, M., Ma, Q. and Li, M. (2020), 'The impact of customer resources on customer value in co-creation: the multiple mediating effects', *Journal of Contemporary Marketing Science*, Vol. 3 No. 1, pp. 33–56.

Zhao, Y., Chen, Y., Zhou, R. and Ci, Y. (2019), 'Factors influencing customers' willingness to participate in virtual brand community's value co-creation: The moderating effect of customer involvement', *Online Information Review*, Vol. 43 No. 3, pp. 440–461.