



# Technology as a Disruptive Agent: Intergenerational Perspectives

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## Abstract

This study explores how British South Asian parents perceive their children's technology consumption through their collectivist lenses and interdependent values. The findings for this qualitative study indicate that second and third generation South Asian parents acknowledge the benefits of children's technology use; but largely perceive technology as a disruptive agent, whereby children are becoming isolated and increasingly independent within the household. The analysis aims to understand how parents view their children's relationship with others as a result of technology consumption. Accordingly, this paper proposes an extension of the *Construal of self conceptualisation* and contributes a *Techno-construal matrix* that establishes a dyadic connection between technology consumption and cultural values. Overall, the study reveals that children display less inter-reliance and conformance typically associated with collectivist cultures, resulting from their technology use. Consequently, parents interpret their children's shift from interdependence to more independence as a disruptive and unsettling phenomenon within the household.

**Keywords** Parenting · Technology · Children · Asian · Collectivism · Interdependence

## 1 Introduction

The explosive rise, accessibility and use of media devices has led to children possessing multiple devices (Gentile et al. 2014; Gutnick et al. 2010; Milani et al. 2015; Shin and Li 2017), providing new challenges in terms of monitoring and tracking children's technology use. Therefore, the debate surrounding the use of technology among children is more so pertinent and timely now than ever. While there is no denying the extensive benefits of children's technology use (Granic et al. 2014; McQueen et al. 2012; Radesky et al. 2015; Radesky et al. 2016), this study focuses on the challenges and growing number of concerns resulting from children's technology consumption. Growing up, parents unremittingly advise children not to open doors to strangers, yet the widespread, under-monitored nature of technology provides the platform for children to open that very door, to strangers on

the internet. Online paedophiles are at epidemic levels (Campbell 2016), presenting an array of challenges for communities and parents alike. Recent trends on social media have witnessed a spike in online vigilantism with groups targeting online paedophiles increasing to more than 75 in the UK (Hamilton & Swerling 2018). While the topic of vigilantism is an extensive debate in itself which divides much opinion, this phenomenon is a testament of the hazards associated with children's social media use.

A host of studies have highlighted the adverse impact of technology on children, from the context of gaming (Anderson et al. 2010; Ferguson 2013; Lemola et al. 2011) performance in school (Rouis et al. 2011; Salvation and Adzharuddin 2014; Rithika and Selvaraj 2013) and the difficulty to manage children's screen time, as children get older (Ofcom 2014). In spite of this, trends such as Bring-Your-Own-Device (BYOD) to schools, whereby children are encouraged to bring their laptops, iPads, tablet computer, iPod-touch, and smartphones to school (Hopkins et al. 2017) are on the rise. Recent reports also suggest a high frequency of cyberbullying worldwide (Görzig and Frumkin 2013), including children, who experience newer forms of bullying, that go beyond the physical boundaries of space (Livingstone and Helsper 2008) resulting from the extensive use of group messaging apps such as WhatsApp, Instagram and Facebook Messenger (Ofcom 2014).

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Furthermore, the rise of technology use amongst children is also reshaping socialisation processes, as studies reveal that children also influence and educate their parents on the use of digital media (Correa 2014; Correa 2015), unsurprisingly, given the gap in media literacy between parent and child (Rideout 2013). This therefore highlights a re-configuration of socialisation processes, contrary to the traditional notion whereby children are considered passive inheritors of their parents (Van de Bergh 1998). Kuczynski (2003) posits that children are also active agents who are able to intentionally /unintentionally influence their parents. This ‘intergenerational transmission’, whereby children influence their parents (De Mol et al. 2013) in media and technology use can be problematic, particularly, as parents may be blinded and relatively uninformed regarding newer, more updated forms of media and applications, as compared to their children, thus risks of information sharing and disruptive technology exposure may easily be underestimated.

### 1.1 South Asian Communities

The challenges associated with children’s technology use are ubiquitous and directly impacts parenting. The roles of parents are pivotal, as effective interventions of children’s technology use can influence their sleep, school performance, and prosocial and aggressive behaviours (Gentile et al. 2014). However, a recent study reveals disparity of parenting practises between White and South Asian ethnic groups in Britain (Iqbal and Golombok 2018). ‘British South Asians’ is a superordinate ethno-racial category, mainly used to identify people of Indian, Pakistani and Bangladeshi origin (Jaspal and Cinnirella 2012). As the largest ethnic minority group in the UK, British South Asians (Jaspal and Coyle 2010) have attracted much academic interest since their initial movements in the 1950’s. However, the phenomenon and nature of studying British South Asians as a subject has undergone a transformation over time, from establishing facts relating to their immigration into Britain, through to attempting to gain an insight into how they incorporated as a minority group within British society (Pande 2014). What makes this minority group intriguing and insightful is their continued association and display of heritage and ancestral culture, translating to traditional, collectivist (interdependent) values in British society (Berthoud 2000; Lau 2000). Chen et al. (2015) highlight that collectivism places emphasis on relationships between family members of wider groups. Accordingly, Paiva (2008) posits that often immigrants fail to embrace the culture of their adopted nation, instead remain loyal to their cultural beliefs and practices, yet this too is the case for second generation families, who continue to hold strong inclinations towards religious, cultural and ethnic identifications as part of their disposition in society (Christine 2007).

Cultural socialisation refers to the process whereby parents inform their children regarding their racial heritage and history (Hughes et al. 2006; Umana-Taylor 2004). Central to this cultural socialisation process for South Asians are the concepts of family honour, shame and respect (Haddad et al. 2006), obedience and obeying elders (Greenfield et al. 2003). Therefore, it remains to be seen to what extent the traditionally collectivist, interdependent values and culturally relevant parental goals of South Asian families are being disrupted as a result of reversed socialisation relationships through processes of bottom-up technology transmissions (Correa, 2014) and children’s increased technology and media consumption, particularly given the associated risks and challenges highlighted.

## 2 Research Rationale and Motivation

Studies relating to parental involvement of children’s technology use is scant (Zaman et al. 2016). Parental mediation studies have concentrated on children’s use of Internet (Lee and Chae 2007) children’s gaming tendencies, (Nikken and Jansz 2006) social media use (Shin and Ismail 2014) and even children’s use of multiple forms of digital devices (Shin and Li 2017). Consequently, while a plethora of studies have focused on children’s technology use, studies on the role of culture in interpreting children’s technology consumption remain scarce. Although Shin and Li (2017) vaguely acknowledge cultural dimensions in parental mediation (by drawing on distinctions between Western and non-Western orientations), their study from the context of Singapore, acknowledges non-Western values from a non-Western context. This study differs in that it aims to address the role of non-Western values (South Asian culture) in a Western context (Britain). Therefore, the study addresses some of the shortcomings in the extant South Asian literature and technology literature by focusing on South Asian families in the UK, and exploring how technology is impacting collectivist values in the British South Asian households.

In general, the study of South Asians in Britain is a well-established research field. Similarly, children’s technology use also belongs to a well-researched and extensive body of literature, however there remains a scarcity of dyadic studies interlinking the two domains. As a result, this study aims to provide insights into a topic that is both timely and pertinent for several reasons. Firstly, concerns surrounding children’s technology use continues to dominate both mainstream and academic narratives, particularly given that children and parental technical abilities are increasingly growing at different rates. This technical disparity is further impacted by the pace at which technology is also advancing. Thus it can be argued that the parent-child technology detachment will only continue to rise, if parental trepidations are not properly

acknowledged in light of factors such as cultural influences, which are often overlooked. Therefore, from a practical perspective, the dyadic approach of this study from both inter-generational and cultural lenses is highly relevant as it can reduce obscurity by identifying the extent of this disparity and the possible causes in South Asian households. From a theoretical perspective, the insights resulting from this research may assist in offering techno-cultural lenses for future studies, which would fill a significant gap since techno-cultural dimensions have been largely overlooked in the extant literature. Consequently, the research questions for this study are:

*1a) How does children's technology /media use affect parental space in South Asian households?*

*1b) How does children's technology / media use impact communication patterns in South Asian households?*

## 2.1 Context: Bradford

Bradford is a relatively small city, with a comparatively large Asian population, consequently making it an ideal setting for the study of British South Asian families. While the city has celebrated plenty of South Asian entrepreneurial successes, with over 260 businesses established as early as the 1970's (Dahya 1974), the city has also faced many socio-economic challenges over the years. According to recent statistics, Bradford is ranked the 5th most income deprived local authority in England, with wide variations across the district with 27% of the districts population living in areas classed in the 10% most deprived areas in England and 6% of the population living in areas classed in the 10% least deprived areas in England. Furthermore, Bradford has a low-wage, low-skills economy and the working age population of the district is projected to increase by 1200 people per year over the next ten years, therefore driving a real need for high paid jobs growth (Office for National Statistics 2016).

However, from within a developing context, Information Communication and Technology (ICT) can drive forth changes, providing digital opportunities for social, economic and environmental development (Dabla 2004). The adoption of ICT in communities can advance levels of education and training, increase accessibility of information, thus providing social and economic empowerment. In addition, it can help deliver economic growth through e-commerce, act as a source for knowledge distribution and can directly aid employment generation for the poor section of the society (Gulati and Kaur 2017), thus fostering economic growth and reducing poverty (Hargittai 1999). While it is widely reported that on an individual level, impediments to ICT adoption and implementation can be influenced by age, cost, technology use anxiety, and computer illiteracy (Palvia et al. 2017; Saleminck et al.

2017), to what extent culture may affect the socio-economic dynamics is worth exploring from within the South Asian context.

## 3 Research Context: Technology Use and Disruption

The growth and dispersion of technology has disruptively transformed daily life, determining how we manage our day-to-day activities from social and working contexts, through to altering dynamics within the household (Zillmann et al. 1994). Consequently, there is no exaggeration in making the claim that technological devices have taken over our lives, to the extent that the technology we once managed has come to manage us. Significantly, the rise and subsequent ease of accessing consumer digital devices has contributed to an increase in the use of technology, particularly that of children. (Ofcom 2014; Rideout 2013). The pace at which technology continues to advance has altered the way in which children study, engage and acquire knowledge as well as transforming how they communicate with one another (Wartella et al. 2013). A plethora of studies have explored the phenomenon of technology from various perspectives, with a significant portion focusing on the interplay of technology with children. While the benefits of technology are well documented, particularly from the context of the classroom, this is not as self-evident in the home (Smedts 2008). A host of previous studies have revealed that excessive screen time (display of content via smartphones, TV's, tablets, gaming consoles) may be linked to a multitude of outcomes that are detrimental for children, such as health problems (Marshall et al. 2004; Wake et al. 2003) educational difficulties (Rideout et al. 2010) rise in depressive symptoms and overall psychological difficulties (Breland et al. 2013; de Wit et al. 2011; Page et al. 2010) and aggressive behaviour (Zimmerman and Christakis 2007).

While the debate surrounding the impact of technology use of children is historic, it is no less relevant today. Clark (2011) posits that the outcomes of technology use on children can be controlled through properly managing and mediating the use of technology. However, this parental mediation and management is not without challenges. The evolving nature of digital media has altered parent / child dynamics as such that parents are perceived as 'digital immigrants' while the children, superiorly, are the 'digital natives' (Rideout 2013). This shift in balance represents parents' fears and insecurities as they no longer feel acquainted nor technically literate to educate their tech-savvy, digitally advanced children appropriately (Wintour 2008). Parents feel a degree of uncertainty when it comes to incorporating multiple mobile devices for their children, thus the nature and underlying causes of this ambiguity

is worth exploring further from within the context of families (Sanders et al. 2016).

Parents actively influence the behaviour of their children from as early as the time their born (Buijzen and Valkenburg 2005). The degrees to which parental goals, values and behaviours differ overtime can be influenced by a wide range of factors, and are often culturally driven. Therefore the role of culture must be acknowledged when attempting to make sense of parenting in society (LeVine 1980). People from similar cultures often display similar parental traits and their parental goals are accustomed and influenced through the distinct beliefs and unique ideas shared in cultural groups. Therefore, more needs to be understood in respects to the culture and technology dyad, particularly exploring how culture may mediate the use of media and technology in the household.

It is believed that cultural and value orientations may guide technology mediation strategies and parental styles (Kirwil 2009). Therefore, it is vital to examine the antecedents of parental mediation in non-Western cultures. The South Asian ethnic group is of significance in the context of UK, particularly given their strong cultural ties and their large presence in the UK resulting from two major periods of migrations to the UK (from India and Pakistan) during the 1960's and 1970's (Iqbal and Golombok 2018). According to the 2011 census analysis, after Whites, Indians were the second largest ethnic group (2.5%), closely followed by Pakistanis (2.0%) in England and Wales (Ethnicity and National Identity 2011). The protocols and parenting practices of South Asians, differs to that of White parents (Iqbal 2014) as will be highlighted further, therefore to what extent this disparity is evident regarding parents technology mediation is a topical and relevant discussion.

Previously, studies have highlighted the role of culture in parental practises. For instance, Harwood et al. (1999) reveal disparity between European American and Puerto Rican mothers parenting approaches, similar gaps are also evident between the cultural communities associated with Western and non-western cultures in the UK, where both sit on opposing ends of the construal of self (Iqbal and Golombok 2018). The focus of this study is the South Asian household, who are predominantly rooted in a collectivist culture (Triandis 1994), that strongly supports unity, togetherness, loyalty, and compliance from immediate and extended members of the family. The core of this collectivistic approach is hinged on family honour and orientation and agreeing to the decisions of elders (Hines et al. 1992; Hickey 2004). Supporting this, Greenfield et al. (2003) posit that non-Western cultures such as South Asian cultures are established on interdependence and collectivistic orientated ethnotheories that stress the importance of responsibility and family honour, contrary to the independent-oriented culture of Western cultures, which support more curiosity, creativity, assertiveness and self-direction.

Furthermore, South Asian cultures are known to promote an authoritarian-like approach to parenting whereby children's relationships with others are emphasised, while also being encouraged to conform to established set of values (Chao 1994). Therefore, the parent-child bracket is viewed as extremely important in South Asian culture, and as a result of the significance placed on this dyad, parents' expectations are tremendously high, particularly South Asian mothers (Maiter and George 2003). However, technology sensing within the family context can be complex. Cultural aspects are a key player in the technology relationship, emphasising the link between the family culture and the values applied to digital technology. The culture of a family (immediate and communal) drives a family's decision about technology. Cultural influences such as ethnicity, religion, education, political views and values form this family culture and dictate how the technology is interpreted. Some merely see it as a tool, whereas for others, it can be 'distrustful' and treated as an 'enemy' (Gold 2015).

Therefore, the question arises, whether the nature and extensive use of technology within the household challenges the collectivist, identity rich, family focused attributes that are central to South Asian communities. The excessively habitual engagement with technology, particularly the mobile phone can result in disengagement and disconnection with the family, books and thought (Powers 2010). Thus, the advancement of new technologies offers children, and youth alike the independence, isolation, and possibly unrestricted access to risks that can be viewed as potentially undermining and opposing the collectivist foundations of the modern South Asian household. Particularly, if children observe the technological divide between themselves, the 'digital natives' and their parents, the 'digital immigrants', as a means of freedom from collectivist, parental involvement in their lives. While studies report that children pursue technology for educational needs, it is also reported that their use is largely developmentally inappropriate or deficient of educational content (Forehand and Long 2010), thus further alienating the South Asian collectivistic narrative.

Furthermore, social networking and social media continues to attract audiences from all types of demographics, including youths and children. The advancements of digital devices poses further challenges for parents, whereby devices are no longer stationary but portable and mobile, making it difficult for parents to monitor their children's use of them (Shin and Li 2017). This can be seen as more challenging for parents who uphold collectivist values and are known to actively support and mentor their children's activities. Therefore possibly leading to the engagement and even exploitation of young people (Bernard and Shea 2015). Bornstein (2012) argues it as being highly desirable for parents and children to communicate in ways that are faithful and in compliance to their cultural context. Yet, with the advent and explosion of

technology use in the household, the very fundamental processes of communication may be threatened as a result of technology, the disruptive agent.

While a plethora of technology mediation strategies are reported in the literature, such as active mediation, restrictive mediation and co-use mediation (Austin et al. 1999; Clark 2011) through to ‘Monitoring’ (Livingstone and Helsper 2008) and ‘Supervision’ strategies (Nikken and Jansz 2014), there is no consensus regarding which is the most appropriate approach for parents (Shin and Li 2017). Additionally, majority of these reported mediation approaches were mainly applied in Western cultures, compromising individualistic values. Therefore, it is yet to be explored, how parents from South Asian families, from a collectivistic orientation would manage their children’s technology and media use.

#### 4 Theoretical Framework: Construal of Self

The conceptual underpinning of this study utilises Markus and Kitayama’s (1991) conceptualisation of independent and interdependent self-construal to gauge how parents interpret their children’s technology use from a cultural viewpoint. The self-construal typically defines how individuals see the self in relation to others. The role of the self is pivotal in understanding how people perceive, and interpret themselves in the world, consequently the construal of the self, differs considerably from culture to culture, thus influencing and determining people in different ways. As established from the literature, South Asian cultures holds a distinctive view of individuality, that displays an overt affiliation of people to one another, referred to as the Interdependent Self Construal (InterSC) in Markus and Kitayama’s (1991) conceptualisation. Conversely, the Independent Self Construal (IndSC) refers to individuals associated with Western cultures, who strive to maintain independence from others by determining and demonstrating internal attributes such as traits, abilities and attributes.

The study explores the degree to which the use of technology in households has impacted the self-construal of children in South Asian households. Accordingly, parental interpretations and perceptions will be central in revealing this. While the Self construal model is highly relevant in the context of this study, as it is valuable as a practical approximation of what individuals in a specific cultural context (British South Asian in this context) have in common (Norasakkunkit and Kalick 2002), the values that underpin South Asian cultures also need to be contextualised in conjunction with the Self construal model.

#### 4.1 Collectivist Value System

In fulfilling the cultural premise of this study, the collectivist value system will be contextualised for South Asian families. Parental mediation and interpretation of their children’s use of technology will be explored in line with the underlying values associated with collectivist cultures as reported in the literature. Accordingly, Table 1 highlights the theoretical strands of the collectivist perspective that will be central to the cultural enquiry of this study. The theoretical constructs identified in Table 1 are a representation of South Asian collectivist values, which will be used to explore children’s technology use from a collectivist viewpoint.

#### 4.2 Collectivist Vs Individual

As highlighted previously, individualistic values which are commonly associated with western cultures promotes relatively loose bonds with others (Zheng 2017), whilst encouraging more independent-oriented ethnotheories, emphasising self-maximisation, assertiveness, curiosity and creativity, autonomy, and self-direction (Iqbal and Golombok 2018). Individuals from such contexts are encouraged to detach themselves from others, including close family, in order to develop their own goals, motivations, and personality, (Markus & Kitayama 1991; Triandis 1994). Therefore, individuals holding individualistic values are more likely to assess the usefulness of the technology on their own, without consulting other family members (Zhang and Maruping 2008), and typically try to obtain information independently from direct and formal sources which are detached from their social contexts (Kim 2008). Accordingly, the role of Western, individualist values in the consumption of technology is evident in the study conducted by Ling (2000), which revealed how individualist children see the use of mobile telephones as a means of emancipation and individuality, providing them with a convenient and easily recognised symbol of independence from their parents.

The values and attributes highlighted in Table 1, relating to South Asian collectivist cultures mirrors the Interdependent Self Construal (InterSC) described by Markus and Kitayama (1991), while the values and traits evident in Western cultures (Johnson 1985; Marsella et al. 1985; Miller 1988; Shweder and Bourne 1984; Dodd 1973; Wakil et al. 1981) reflects Markus and Kitayama’s (1991) Independent Self Construal (IndSC). While the authors make no explicit connection between InterSC and Collectivism and IndSC and individualism, their connection is strong to the extent that it is difficult to distinguish between them.

Supporting this further, Cross et al. (2011) argue, that while conceptually Individualism and Collectivism (IND-

COL) are dimensions that define cultures, the self-construal of InterSC and IndSC are used to describe individuals. Therefore, the conceptual framing of this study is in line with Cross et al. (2011) reasoning, the Self-construal can be referred to as a component of culture, which will be used to see how children's technology use is affecting cultural values. The central theme of this research is culture (IND-COL), whereas the focus is individuals, i.e. children, and how their parents perceive their technology use. Accordingly, to what extent the role culture (Collectivism) plays in mediating and interpreting the impact of technology on children's disposition (InterSC / IndSC) in South Asian households will be explored.

Therefore, while the South Asian value systems outlined in Table 1 will be used to establish cultural settings in families, the construal of self will be used to illustrate the degree to which parents believe the use of technology impacts their children's interactions and dealings with others. In order to understand this further, a set of research propositions will be explored.

## 5 Study Propositions

The interdependence between individuals from collectivist cultures is widely reported, however the extent to which the dependence between child, parent and other family members has transformed as a result of technology is a discussion yet to take place. As a consequence, by applying Markus and Kitayama's (1991) conceptualisation of Independent and Interdependent Self-Construal and supporting this through the examination of key collectivist values, the study explores the impact of children's technology consumption in South Asian settings, thus opening up a new departure in South Asian parental and technology literatures. Accordingly, the following key propositions will be explored in order to address the Techno-Cultural dyad of this study:

**Proposition 1** The reversal of socialisation as a result of 'intergenerational transmission' of technology is a threat to South Asian Parents.

The study proposes this as a result of the digital 'immigrants and natives' disparity between parents and children, and the fact that children are increasingly educating and informing parents regarding technology. Thus this socialisation shift is disruptive to South Asian parenting, given their collective, authoritarian nature. South Asians parenting is proactively orientated, whereby agreeing to the decisions of elders is the norm, as opposed to it being the other way round, as increasingly the case during intergenerational transmissions.

**Proposition 2** South Asian parents acknowledge the benefits of their children's technology use but largely perceive it as unsettling the South Asian household.

Technology use can be both beneficial and hazardous for children. South Asian households are socially oriented, with emphasis on harmony, togetherness and openness. The role of individuals in such cultures is to preserve and fulfil expectations of significant others, notably the family. However, the rise in the accessibility of multiple media devices and increased use by children is leading to family disconnection, and more individualistic practises, whereby parents are not fully aware of 'what their children are up to' thus leading to parental obscurity, which typically is uncommon in South Asian cultures. Furthermore, the risks of technology in South Asian households are magnified due to their collectivist values and central emphasis on shame, family honour and respect in the community.

**Proposition 3** Children's technology use is leading to a deviation from collectivist values to more individualistic values.

Children are now open to a borderless world through time-space compression as a result of technology. Therefore, providing children with platforms to explore, engage and assimilate to wider audiences and communities, not solely family and friends. This independence provides a separation from collectivist social context and thus a shift from interdependent values through to more independent values.

## 6 Methodology

This study takes a qualitative research approach, through the use of semi-structured interviews. This approach is suitable for studying human behaviour and behavioural changes, thus the complexity associated with culture, families and the role of technology can be effectively and thoroughly studied using qualitative lens. The philosophical premise for this study is interpretivism, as this approach promotes in-depth understanding whilst uncovering underlying beliefs and values, which is imperative given the cultural context of this study. The study also utilises theory and previous knowledge, as doing this during the initial stages of interpretive studies assists in aligning the research with an appropriate conceptual framework that assists in guiding the topics and approaches of empirical work during the early stages (Walsham 1995). This therefore is reflected through the conceptual framing and propositions outlined for this study.

**Table 1** South Asian collectivist values

Collectivist values	Description	Writers
Respect	Respect has various strands and overlaps with other values. It is predominantly centred towards the respect individuals have for their elders, the family hierarchy as well as self-respect in line with cultural traditions	Iqbal and Golombok 2018; Wardak 2002;
Social orientation	Emphasis on the group as opposed to the individual to the extent that individuals views, capabilities, and personal characteristics are only secondary roles—rather emphasis is placed on the family and group with the desire of meeting expectations of significant others	Fiske et al. 1998; Markus and Kitayama, 1991; Markus et al. 1997; Smith and Bond, 1993; Triandis 1994; Zaidi et al. 2016;
Honour	Honour or ‘izzet’ is central to South Asian households, which refers to the honour of the family that can be affected by the actions of individuals in the family. Much emphasis of ‘izzet’ is placed on the women of the household. Any acts that oppose the cultural values can deplete family honour in the eye of immediate family members and the dense social networks	Abu-Laban 1974; Akpinar 2003; Das Gupta 1997; Dion and Dion 2004; Dodd 1973; Ghosh 1984; Haddad et al. 2006; Hickey 2004; Kallivayalil 2004; Naidoo 1984; Shapurian and Hojat 1985; Wakil et al. 1981; Zaidi et al. 2016
Norms	This refers to the religio-cultural norms that individuals conform to. There is a distinction between religious norms and cultural norms, yet both are viewed synonymously by South Asians.	Abbas 2005; Hsu 1948; Yang 1981; Zaidi et al. 2016
Shame	The overarching emphasis on individuals from immediate and extended family members not to bring shame on the family as a result of ‘deviant’ acts that oppose the religio-cultural norms.	Ayyub 2000; Haddad et al. 2006; Hickey 2004; Tonsing and Barn 2017; Zaidi et al. 2016;
Obedience	Obedience shown towards elders / significant others in a group regarding their decisions and choices. The obedience individuals portray towards elders positively correlates with other	Ayyub 2000; Bhattacharya 2016; Iqbal and Golombok 2018; Varghese and Jenkins 2009

**Table 1** (continued)

Collectivist values	Description	Writers
	aspects of the collectivist value systems, such as respect.	
Conformance	Conformity relating to co-operation, respect and familial loyalty, which can extend from immediate family members through to other members in dense social networks	Huang and Harris 1973; Kim and Markus 1999; Meade and Barnard 1973; Nisbett et al. 2001;
Loyalty	Loyalty to cultural and religious beliefs as well as the loyalty between individuals in their social groups and families. Whereby spouses showcasing loyalty to one another, with more emphasis placed on women upholding specific loyalties towards their husbands and fathers and similarly children are to show loyalty towards their parents.	Ghuman 2003; Iqbal and Golombok 2018;
Image	A emphasis and focus on the perceptions of significant others / individuals from families, social networks focus on oneself / family	Corinne and Županov 2012

This research focuses on British South Asian parents, in doing so 10 semi-structured interviews were conducted with parents from 10 British South Asian families. The parents, summarised in Table 2, comprised seven fathers and three mothers who ranged between the age groups of 28 – 43, thereby consisting of both second and third generation British South Asian parents. All the participants of this research live in the district of Bradford, West Yorkshire and surrounding areas. Bradford was nominated due to it hosting an extensive South Asian population, particularly given its relatively small size (Office for National Statistics 2016). The sample was made up of 3 sub-groups of British South Asians, consisting of British Pakistanis (5), British Bangladeshis (3) and British Indians (2). Six participants were second generation (2 of British Pakistanis, 2 British Bangladeshi, 2 British Indian) while four were third generation (3 British Pakistanis, 1 British Bangladeshi). The exponential non-discriminative snowball sampling approach was used to recruit the participants for this study, whereby every participant in the study recruited another participant, in accordance with the sample

criteria of a British South Asian parent. The initial participant of the study was recruited through the social network of one of the researchers.

The snowballing sampling was considered a suitable approach given the close-knit nature of community where the research was taking place, where the use of social referral could assure better researcher acceptability by the participants. It is reported that this approach has previously worked effectively in recruiting participants from collectivist cultures (Liou et al. 2013; Papadopoulos et al. 2002, 2012.). Furthermore, this method is often used when the participants for a study are hard-to-reach due to either their special characteristics or sensitivity of the study subject (Browne 2005), both of which were present within this research. Brackertz et al. (2005) provide a broad categorisation of populations which are hard-to-reach, and include a group which belongs to an unsteady social and economic situation. Therefore, while the authors acknowledge that Bradford is densely populated with British South Asians, the socio-economic challenges of Bradford, alongside the themes of technology literacy / illiteracy and potential cultural dilution of this research were considered to be of a sensitive nature by the authors. Furthermore, recruiting participants from ethnic minority groups is often difficult (Iqbal and Golombok 2018), particularly those originating from lower socioeconomic status (Nazroo, 2006). Additionally, ensuring the families were all British-born, and specifically distinguishing between second and third generation was also difficult.

As a result, given the context of this research, any outsider intervention in the way of a researcher would possibly be seen with suspicion and can be contentious, thus social referral paved the way for better access through sanctioning from within the community, by social actors who shared similar norms, values and backgrounds. Therefore, the benefit of snowball sampling for this research lies in its usefulness, where some degree of trust is required to initiate study subjects' recruiting process (Shaghghi et al. 2011).

Semi-structured interviews were used to explore how the participants perceived their children's technology consumption. The semi-structured interviews consisted of 12 exploratory, open-ended questions (see Appendix Table 5) which served as a guide to reveal parents views regarding their children's technology consumption. These questions were informed by the extant literature and considered to address the research questions of this study. As the study centred on cultural values, the interview guide also addressed key collectivist values (outlined in Table 1) consisting of; family honour; social orientation, cultural norms, obedience and loyalty. However, the interviews were not limited to only collectivist values, as other themes were also covered during the interviews. For instance, prior to discussions with respects to collectivist

values, the interviews explored the participant's socio-economic status, everyday parenting and their own technology literacy. The interviews also covered themes relating to racism and discrimination, intergenerational differences, and social lives. Eight interviews were conducted in the participants' homes, while two were performed at the researcher's home. Each interview on average took between one hour to one and half hours. Upon the informed consent of the participants, the interviews were audio taped and transcribed verbatim. Different members of the research team examined each transcription, ensuring errors were eliminated. Ethical approval was granted by the University of Bradford, School of Management. In upholding anonymisation, the participants' names were replaced with their initials in the study.

## 6.1 Data Analysis

Qualitative thematic analysis was used to analysis the data with the aim of exploring the study propositions, whilst also allowing for unexpected findings and insight to emerge from the data (Klein and Myers 1999). This analytical approach which involves data transcribing, coding and analysing is a flexible and useful research tool that provides a rich and highly detailed, yet complex account of the data (Braun and Clarke 2006), allowing for various aspects of the research topic to be interpreted (Boyatzis, 1998). Furthermore, this approach allows the researchers to use appropriate theoretical concepts with the aim of adding theoretical depth to the data analysis. During the analytics process, familiarisation of the data was achieved through the process of reading each participant transcriptions repetitively. The initial emerging themes were noted for each participant, which reflected the key aspects of each account. Data that shared similar meanings were then categorised, which eventually led to identification of broader themes across each of the data sets, as highlighted in the analysis summary provided in Table 3. In doing so, these superordinate themes reflected British South Asian Parents interpretations of their children's technology use over the 10 accounts, which were subsequently placed into a coherent and clear structure in conjunction with appropriate quotations that revealed the parental narratives. The findings will be discussed in line with the propositions of the study, with data also being presented in an abridged format to assist in analysis across the 10 accounts.

Through this process of qualitative thematic analysis, the superordinate themes of 'Intergenerational transmission fears', 'Disruptive technology', 'Risk vs benefits' 'Association shifts' and 'Religious centrality' were gleaned from the data, thus reflecting British South Asian Parents interpretations of their children's



**Table 2** Participant profiles

Participant initials (Gender)	Ethnic sub-group	Age range	Generation	Children age range
S.M (male)	5 x British Pakistani	33- 43	2 x 2nd generation	4 – 21
I.H (male)			3 x 3rd generation	
N.K (female)				
N.T (female)				
S.Y (male)				
P.H (male)	3 x British Bangladeshi	28 – 33	2 x 2nd generation	13 – 17
N.A (male)			1 x 3rd generation	
K.M (male)				
B.B (female)	2 x British Indian	37 – 39	2 x 2nd generation	12 – 16
A.K (male)				

technology. For the ‘Intergenerational transmission fears’ theme, the authors identified initial codes emerging from the data, which led to the sub-themes of ‘lack of technological awareness’ and ‘uncertainty’ being identified. These sub-themes regularly appeared in the data and related to how traditional top-down socialisation was being replaced with a trickle-up effect, whereby due to lack of technology proficiency, parents no longer can assume the role of teacher as children were now informing parents regarding technology use, therefore creating a sense of uneasiness for parents. The authors also categorised the subthemes of ‘social media addiction’, ‘family time impact’ and ‘less openness’, as the subordinate theme of ‘disruptive technology’, particularly as parents viewed their children’s technology use as creating a divide in the family, impacting social family time through reduced communication and interaction and thus disrupting family dynamics. Additionally, the data also revealed frequent reference to the risks associated with children’s technology use. While parents saw the benefits of technology use predominantly from an educational perspective, thus referred as the ‘educational benefit’ sub-theme, the relative drawbacks of technology significantly outweigh the benefit. This was identified through a plethora of codes with made up the sub-themes of ‘Family honour risk’, ‘Content risk’, ‘Disengagement risk’, ‘Online bullying’. The ‘Association shift’ theme was made up of the ‘Friends over parents’ and ‘Virtual friends’ sub-themes. This theme outlined how the nature of technology, was transforming traditional collectivist values by shifting the association between child and parent, to child and friend, and also virtual friends through social media use. The theme of ‘Religious centrality’ was identified from the datasets, particularly for the Pakistani and Bangladeshi participants. This theme consisted of sub-themes which related to the ‘Direction’ and ‘Protection’

religion provided. These key themes are discussed in greater detail in the following section.

## 7 Findings and Discussions

This research set out to go beyond extant discussions of children’s adverse technology use, by focusing on how technology use amongst children may even adversely impact households, British South Asian households. The insights uncovered a plethora of concerns, with many centred on issues such as fears of radicalisation, exploitation, health and educational concerns and many others. Consequently these were labelled as *Universal concerns*, which as well as being well documented in the extant literature (Anderson et al. 2010; Ferguson, 2013; Lemola et al. 2011; Rouis et al. 2011; Salvation and Adzharuddin 2014; Rithika and Selvaraj 2013), also typically affect parenting as a whole, regardless of cultural disposition. For instance, while reflecting on his own childhood experiences I.H, [41 year old, British Pakistani father] reveals how children’s technology use cannot replace the explorative nature of playing and socialising outside: ‘.. it (technology) doesn’t give them the taste of childhood, getting cuts and bruises,... falling, tearing your clothes, coming home crying, all the enjoyments of being a child’. I.H sees the use of technology as disrupting children’s normative socialisation. Further insights resonated with the extant literature, for instance AK, [37 year old, British Indian father] expressed his son’s lack of physical activity due to playing on his gaming console; ‘it’s making them lazy... but does he even go out? And kick the bloody ball, no..’. Similarly, S.Y [33 year old, British Pakistani father] while referring to his children’s lack of exercise also posits: ‘Only thing that’s getting a workout is their fingers, nothing else!’.

**Table 3** Qualitative thematic analysis summary

Themes and Sub-themes	Brief description of sub-themes	Frequency of reference to the sub-themes
Intergenerational transmission fears		
a) Lack of technological awareness	a) Children are drivers of newer forms of technology in families, thereby reversing top-down socialisation typically associated with collectivist cultures	7
b) Uncertainty	b) Parents remain uninformed regarding technology trends and social media applications, as such are not fully aware of how it is utilised by their children	9
Disruptive technology		
a) Social media addiction	a) Children constantly spending time on social media, leading to increased isolation	6
b) Family time impact	b) Lack of interactions during typical 'family time' such as during dinner or at family gatherings resulting in disengagement and rigid boundaries	11
c) Less openness	c) Children becoming more withdrawn and introverts, making it difficult for parents to maintain reasonable communication and oversight of their children.	9
Risk vs Benefits		
a) Family honour risk	a) Risks associated with the participatory, interactive nature of technology can lead to inappropriate use, which can bring shame upon the family	6
b) Content risk	b) Viewing inappropriate material or interacting with strangers was viewed as a risk of technology	8
c) Disengagement risk	c) Technology runs the risk of disengaging children from their immediate and significant others, thereby creating an anti-social culture	6
d) Online bullying	d) Fears of cyber bullying, whereby children are harassment and bullied via social media	5
e) Educational benefit	e) Benefits acknowledged, predominantly from an educational perspective	7
Association shift		
a) Friends over parents	a) Through technology and social media platforms, children and friends were continuously in touch, creating space between children and parents	6
b) Virtual friends	b) Children becoming increasingly associated with virtual friends, while not necessarily knowing them in person was also a parental concern	11
Religious centrality		
a) Governance	a) Religious commitment and Islamic values were viewed as foundational in daily family life	7
b) Protection	b) Through upholding religious values, parents believe they are protecting their family from dangers	10

Another example of this type of ubiquitous concern is expressed by K.M [24 year old, British Bangladeshi father], who stresses: *'who can you trust? was it ever like this when we were growing up? Maybe, but the technology makes it more dangerous?'* K.M, referring to the well-documented rise in online paedophilia and the risks associated to this for children. The purpose for identifying *universal concerns* was in order to highlight that one dimension of British South Asian parents' concerns relating to their children's technology use also converges in line with main stream technology concerns. However, as expected, other facets of South Asian trepidations were underpinned by collectivist values, thus largely exclusive to this ethnic minority group.

### 7.1 'We're the Parents, We Know Better' – Intergenerational Transmission

The majority of the South Asian parents acknowledged the disparity between themselves and their children's

technical literacy. Many parents deemed children as a 'step ahead' when it came to certain types of media and acknowledged intergenerational transmission. For instance, N.K [36 year old, British Pakistani mother] expresses: *'I'd like to think I'm clued up [regarding technology]... but comparing myself to them, it makes you realise how far behind we are!.. they're, I'm afraid, the.. teachers'* N.K, defends her own position as a parent by expressing she is 'clued up', however, she continues by outlining that her son's advanced technology is better than hers, so to the extent that she refers to her son as the 'teacher'. The distinction, and to some extent comparison between herself and her son represents a sense of uneasiness resulting from this form of intergenerational transmission.

This was witnessed more explicitly, when P.H [33 year old, British Bangladeshi father] outlined: *'they think they're the know it all generation... sometimes, a [sic] gotta remind them, I'm the dad, we're the parents, we know better [Laughs]..'* Furthermore, A.K similarly highlights: *'I'm not entirely comfortable.. they only tell us what they wanna [sic].. that's my*

*concern'* As these passages reflect, both P.H and A.K reveals a defensive undertone, when reflecting on their children's advancements in technology. Interestingly, while P.H posits that the younger generation think they know it all, he immediately counters this suggestion by positing that as parents, they know better. Though his remarks do not directly refer to knowing better about technology, he generally reaffirms his position within the traditional socialisation process, whereby the parents are the active influencers of their children, not the other way round.

On the contrary, S.M [43 year old British Pakistani father] reveals that he has fewer concerns with intergenerational transmission, than others: *'You'd rather they come home and tell you stuff you didn't know.. it shows learning is taking place'*. Here S.M is comfortable with the idea of intergenerational transmission, however when probed about this in the context of technology, S.M reveals: *'I'm more cautious of them knowing more with.. like their apps and media and stuff, but it's like anything isn't it really?'* Here S.M acknowledges more caution is required with technology, however seemingly expresses less concern than the others. Interestingly, while majority of parents expressed their intergenerational transmission concerns, P.H, A.K and N.K and a host of other second generation parents did so more than S.M, and other third generation parents. This parent-generational difference was concisely expressed by another third generation parent, I.H: *'My parents were threatened by the unknown, the unknown was always trouble! We [third generation] are similar...but more relaxed I'd say?'* I.H outlines that even though his own parents are born and bred in the UK, the notion of uncertainty is always viewed as a threat and challenged in South Asian families.

Therefore, in exploring proposition 1 of this research and in the context of technology, parents expressed concerns relating to technology intergenerational transmission, particularly given the 'hands on' parenting and guiding associated with South Asian cultures.

## **7.2 'Take Anything, but my Phone!' - the Addictive, Disruptive Nature of Technology**

The nucleus of South Asian families is the family itself. However, insights during the interviews reveal that children's technology use is fracturing the close-knit relationships and harmony typically associated with British South Asian households. A common theme that was apparent during the interviews was the degree to which children had become reliant on their media devices and technology as opposed to their interdependence with families and significant others, which is typically associated with South Asian cultures. K.M expressed: *'she'll*

*be on her phone, errr checking YouTube videos, n she'll have heard half the conversation'*. The use of devices at home, often leads to K.M's eldest daughter switching off and being too engrossed with the devices to engage or pay attention to a conversation taking place. He further adds: *'Especially when we have that family time, we're still communicating errr the girls sort of, they're too attracted to the iPad or the iPhone'*. While such behaviours can be witnessed in every household, it has profound impact from the South Asian context, particularly given the collectivist value which centre on family interactions, openness and bonding.

The disruptive nature of technology was further witnessed during A.K's altercation with his eldest son, who had accumulated a significant phone bill: *'I, not in the friendliest way, ordered he hand his phone over.. and he pleaded, summat like do what you want, but you can't have my phone, anything but my phone!'* This demonstrates the emotional and even physiological attachment children, and adults alike have with phones and their media devices, resulting in regular altercations and overall disengagement between A.K and his son. From the collectivist perspective, technology, even the mobile phone is shifting emotional investment away from the family. This was further identified through N.K: *'There isn't much openness, like the openness we had with our elders.. there was less technology then, and more now!'* Similar to A.K, N.K also points out issues surrounding a lack of transparency, while A.K categorically was referring to his son's mobile use and billing, N.K wasn't as specific. Thus, upon further enquiry, N.K outlined that families were not as 'engaged', attributing this to children's engagement with technology, even when it isn't present: *'they'll be with us, but their mind is on other things.. mmm, I know it's cause of constant media use'*.

However, while all the parents acknowledge the disruptive nature of technology use in the house, some discussed means of limiting its negative impact through traditional mediation, accordingly, I.H posits: *'like any other form of parenting, make sure you have the final say and ultimately, trust.. you gotta let them know that you trust them..'* I.H highlights how making his children aware of the trust invested in them, as well as communicating that as parents, they have the final say, assists in limiting technology disruption in the household. Similarly, S.Y expresses: *'I'm giving them a choice, after that it's their choice..but I expect some respect in return'*. Both I.H and S.Y promote a degree of flexibility and openness with their children, with emphasis on both trust and respect, based on this, the parents feel their children are expected to respond accordingly and thus, limit the degree to which their technology consumption is

disruptive. S.M also makes it clear to his children that he trusts them as a means to mediate and limit the risks: *'Like anything in life, we have to trust them.. you could use... a knife to cut potatoes and onions, or you can use it to God forbid, stab somebody, you know. [PAUSE], Car, you can use it as a, as a means of transport..er.. a murder weapon on the road.. similarly, I have to trust they don't'*.

S.M uses this form of intervention, by communicating the dangers of technology in line with the emphasis on trusting his children. There is an over-riding focus on bracketing technology, along with other life elements. He uses the analogies of knives, cars etc. which can be used positively and negatively.

Accordingly, in the exploration of research proposition 2, overall, it can be stated that the technology can be attributed to disrupting family cohesion and harmony, as children are disengaged and withdrawing from family members, while extensively committing to media. This was further contributed through the lack of transparency, openness and ambiguity parents experienced as a result of their children's technology consumption. The findings also revealed that generally, third generation parents such as I.H and S.Y attempt to mediate their children's technology through more openness and deliberation, as opposed to the second generation parents, such as A.K and N.K, whom were more critical and concerned of their children's technology consumption, without emphasising any practical mediation strategies.

### 7.3 'Izzet' Takes Lifetime to Build, Few Clicks to Destroy' - Magnified Risks

The extant literature outlines that technology has both good and adverse effects on children, similar insights came to light during this study, with parents acknowledging the role technology plays in children's self-development, as epitomised by S.M: *'technology plays a major part in a child's development... here's a girl, whose 2 years old knows all her alphabet.. all her basic words'*. Additionally, N.A [42 year old, British Bangladeshi father] also touches upon the educational benefits of technology by acknowledging: *'It's helping them with their education, well it's meant to.. so it'd be wrong to say it doesn't'*. The passages demonstrate that alongside the *Universal concerns*, discussed earlier, there were also the *'Universal benefits'* associated with children's technology consumption that were also acknowledged by the South Asian parents. However, the findings reveal that the parent's culturally latent technology concerns outweigh the perceived benefits.

For instance, A.K highlights how honour and family respect are key themes that inform these concerns: *'Our izzet is everything... while the technology can propel them, it can make them slip up, even easily'*. Technology

use can be both beneficial and hazardous for children. However, the dangers in South Asian households are magnified due to their collectivist values and central emphasis on shame, family honour and respect in the community. K.M provides further evidence of collectivist cultural reasoning when he posits: *'it's not about pros and cons, it's about the impact their actions can have on the rest of us, the technology opens up a whole different world, audience along with new risks, all while being sat at home'*. K.M emphasises the impact of technology misuse *'on the rest of us'*, thus highlighting the magnified, wide-reaching consequences of children's technology exploitation.

A trend whereby the parents would follow up a supportive statement of technology by a magnification of its risks was evident in the analysis. This remained consistently evident irrespective of the extent of the parents own technology media literacy. For instance A.K confesses his limited technology knowhow by stating: *'I'm not as good with technology as maybe I should be.. that doesn't help'*, he then commends technology by stating: *'it's fair to say they're chances of getting somewhere in life without technology are limited'*, subsequently followed by: *'but as parents we gotta make sure, we don't just look at the good, and turn a blind eye to the bad.. the bad is probably more serious...[pause].. content, bullying.. strangers, that sorta [sic] thing?'*. Therefore, A.K perceives risks as taking precedence over any benefits. It can be argued that A.K's own lack of media literacy may be a contributory factor in this.

Intriguingly, there were no real differences between the parents who had little experiences of technology use and the parents who referred to themselves as being technically savvy and literate, with both groups expressing similar views on the benefits and risks of technology. For instance, while S.Y mentions: *'Unlike my parents, I was born into a technology age, so I'd say I'm an advanced users..'* N.K refers to herself as *'Clued up'* and I.H expressed how he graduated with a degree in *'computer science'*, they all saw technology as being more detrimental than good, if left unsupervised. An example of can be seen when S.Y states: *'There's lots of good, but the dangers defo outweighs the good'*, S.Y continues to then draw upon some of the latter: *'it's making kids less sociable, bone idle and lazy.. I was [sic] never like that, me, responsible from a young age, doing paper rounds, helping at home and.. ahm, knew how to host guests [Laughs]'*. As evident, South Asian concerns are connected to central collectivist values, regardless of personal technical literacy. A.K emphasises the *'shame'* value and how honour can be violated as a result of technology misuse, while S.Y discusses how children are becoming less active due to technology. Interestingly, S.Y follows

up by referring to how he was not idle at a young age, which allowed him to do *'paper rounds'* thus emphasising the economic responsibility which is often associated with South Asian males (Varghese and Jenkins 2009). Thus, the degree to which parents see the risks of technology are magnified as a result of their collectivist value systems, which are deep-rooted as evident, even in second and third generation South Asians. Furthermore, the findings also revealed that technology and media literacy did not change attitudes of parents, and a possible reason for this was concisely mentioned by I.H: *'What you don't know, won't hurt you... but what you do know, makes you very paranoid'*.

### 7.3.1 'Close Family are Far, and Far People are Close' – A Shift in the Construal of Self

Earlier discussions have highlighted that technology use is assisting children in their personal development and within their social networks, a consequence of this however, is its disruptive impact within their immediate households. Parents identified their children's technology consumption resulting in limited interactions and detachment between child and family members, to the extent that it is disintegrating the fabrics that hold together South Asian families. The parents outlined the following with respects to this detachment, starting with N.T [39 Year old, British Pakistani mother]: *'Cos of technology, social media, close family are far and far people are close, definitely, definitely.'* N.T highlights that she has witnessed a shift in loyalties, whereby children are becoming more connected and committed to those not traditionally seen as immediate or extended family members as a result of social media. Friends and virtual friendship are increasingly taking precedence over those within the household.

This is further supplemented by B.B [39 year old, British Indian mother], who admittedly *'knows little about social media'* and as a consequence, questions the concept of virtual friends via social media. This is expressed succinctly when B.B mentions: *'my daughter.. she has 300 plus friends [laughs].. how are these even friends? 80% of them, she's not even met.'* This may be prevalent in individualistic cultures, whereby parents emphasis independence and support their children in becoming more independent from the family of origin. This however, is not commonly associated with the social orientation of collectivist cultures. B.B finds it absurd that her sixteen year old daughter's friendship network consists of 300 plus friends, whilst also highlighting her daughter's disengagement disparity: *'yet she probably interacts more with them on her phone, while sitting with us, in person!'*.

N.A expresses similar concerns: *'Kids, theirs family life and social lives are different.. you'd think the people in front of you should matter more, ah, not the case.. I say priorities have changed, for me, growing up the family was the unit'*. N.A, resonating with N.T and B.B, also emphasises the borderless aspect of their children's associations. The fact that he refers to how he was as a youngster, denotes the distinction and shift in children's approach now as compared to the previous generation. N.T also asserts that *'priorities have changed'*, this can be interpreted as how he feels children's display of values are not in line with traditional, collectivistic values. Importantly, what surfaces from these insights are the fact that family time is affected by children's technology consumption, thus creating a distance between parent and child. Due to this fundamental aspect of affecting family dynamics, the parents interpret children's technology negatively.

A further exploration of the findings revealed additional patterns when supplemented against parental demographics. While the parents in general were in agreement, there were subtle differences depending on the parents' generational gap, age and their media literacy as reflected in Table 4. Trommsdorff (2009) outlines the complexity associated with the intergenerational transmission of immigrant families, particularly as parental approaches and socialisation strategies for second generation families are influenced by both their native and traditional cultures.

### 7.4 'Islam Governs – Religious Centrality

South Asian parents' attitudes towards their children's technology use are also found to be impacted by religion. Shaw and Lee (2003) highlight Islamic values are imperative to Pakistani diaspora. This research reveals that this is also the case for South Asians from Bangladeshi heritage, as they too associate strongly with their religious values, for instance K.M mentions: *'It is a guide and form of protection, my religion safeguards me and my family from all types of dangers, including those on the internet'*. Franceschelli and O'Brien (2014) found that Islamic values allow parents to regulate their children's behaviour, and instil values such as ethics and morality. By upholding religious values, parents express how it protects them and their family from any harm, something which also extends to their children's technology use, as S.M posits: *'For me, Islam governs, guiding me how to live and covers every facet of life, including children upbringing, what's good for them and what's bad for them.'* Religious centrality was also evident from other parents, however generally this was more manifest in Pakistani and Bangladeshi parents and less for the Indian parents, thus in agreement with previous research which highlights religion being more important for Pakistani groups than it is for Indian groups within Britain (Robinson 2009). Therefore, it is argued that religious parenting also plays a major role in influencing how parents

perceive and mediate their children’s technology use, thus coinciding with their cultural and ethnic identification.

In summation, it was evident that the second generation parents held higher intergenerational transmission fear of technology than third generation parents. While third generation parents also held similar fears, they would also highlight more positives of general intergenerational transmission. The second generation parents also viewed their children’s technology use as more disruptive, although the third generation also did, however expressed elements such as trust and mediation as a means to lessen the disruption. Additionally, it was interesting to note that regardless of media / technology literacy, both groups of parents associated more risks than benefits with their children’s technology consumption. The underlying basis for this was the collective cultural values, supplemented by the fact that the more technically savvy parents were more aware and informed of the risks, whilst the moderately savvy parents saw more risks, as a result of the uncertainty associated with their children’s technology consumption. Another notable finding was that, generational gaps were more significant than even age, as reflected by second-generation parents who were younger in age, yet

more critical and held higher risk perception of technology, than some older parents from third generations.

For this research, three propositions were addressed based on the extant literature. As a result of the findings and discussions, this study further recommends the following two research propositions for future research:

**Proposition 1** The generational differences between South Asian parents are more significant than age differences when mediating and interpreting their children’s technology usage.

**Proposition 2** South Asian parents interpret their children’s technology use as disruptive, regardless of the level of their own media / technical literacy.

## 8 Theoretical Contributions

### 8.1 Techno-Self Paradigm

Both collectivist and independent cultural values are dichotomous and captivate dissimilar lifestyle scripts. Yet, parents

**Table 4** Findings and mediating factors

Key themes	Generation		Age		Media literacy	
	2nd Gen	3rd Gen	Younger parents (24-33)	Older parents (34-43)	Highly literacy	Moderate – less literacy
Intergenerational transmission fears	Higher fear of intergenerational fears	Lower fear than 2nd gen, but still seen as a risk	Young parents from 2nd gen held higher fear than younger parents from 3rd gen	High degree of fear, amongst older parents from both generations	Lesser intergenerational transmission due to media literacy	Higher level of intergenerational transmission fears due to lack of awareness
Disruptive technology	More disruptive	Disruptive but supplemented with trust	Similar interpretations of disruptive nature of tech, particularly due to parents being from different generations		Slightly better at technology mediation, but still saw tech as disruptive	Viewed technology as excessively increasing parental space
Risks vs Benefits	Perceived more risks and less benefits	Perceived higher risks but also saw many benefits	Younger parents from 2nd generations saw more risks, even though younger. Older parents, from 3rd generations saw more benefits, but still view more risks		More risks, aware of the dangers due to experience	Higher risk perception due to uncertainty
Friends vs Parents	Both generations agreed that children were more connected and involved with friends than parents, as a result of technology use.	Acknowledged friends more closer than parents and more comfortable with idea of ‘virtual friends’	Viewed friend emphasis as a change in the values children and expressed more concerns with respects to ‘virtual friends’		Expressed similar views regardless of media competency. Both viewed technology as a means of reducing space between friends whilst increasing the parental / child space.	
Religious centrality	Religion was seen as playing an important parenting role in protecting children from potential dangers and guiding them towards good actions. This was prevalent for majority of the Pakistani and Bangladeshi parents, across both generations, regardless of age and media literacy. This however was less common for the two 2nd generation Indian parents.					

from collectivist cultures in this research interpret their children’s technological consumption in South Asian households as a disruptive means of narrowing this value system gap. The construal of self associated with collectivist cultures considers the relationship of the self being relatively interdependent of specific others such as parents, friends and family. The in-depth interviews in this study revealed that children’s engagement with technology provides them with time-space compressions, in a borderless world, which is diminishing interdependence between children and their parents, and leading children more towards independence, autonomy and self-direction. While collectivist values endorse the togetherness and interdependence between families and significant others, technology in British South Asian families is disrupting this, by enabling children to prioritise their interactions and maintain virtual friendships that are traditionally given less importance in collectivist cultures. Accordingly, parents recognise that children’s use of technology is diminishing their overt affiliation towards one another within the household, particularly their parents, while enabling children to also maintain independence from others. Thus, in an extension to the Construal of Self (Markus and Kitayama 1991), this study

contributes the Techno-self paradigm along a construal continuum which depicts the transformation, from interdependence to more independent values in children as a result of the technology.

Resulting from technology use, South Asian parents highlight that their collectivist values are to some extent undermined due to the disruptive nature of technology, as highlighted in the Techno-self paradigm. As revealed during the discussions, the parents felt that technology has narrowed the number of significant others (represented as smaller circles in Fig. 1) for their children to mainly their friends and social media / virtual friends, while forming independence from their parents. The Xs represents the different aspects of others relating to the self. It is evident that gradually, the Xs no longer intersect between the self and parents, thus representing their increased detachment and independence resulting from the technology. Therefore, the findings revealed that the children’s technology use is leading to a deviation from collectivist values to more individualistic values as a result of technological advancements and the participatory capabilities of technology. Additionally, another contribution of this research is the Techno-construal matrix (Fig. 2), which in addition to

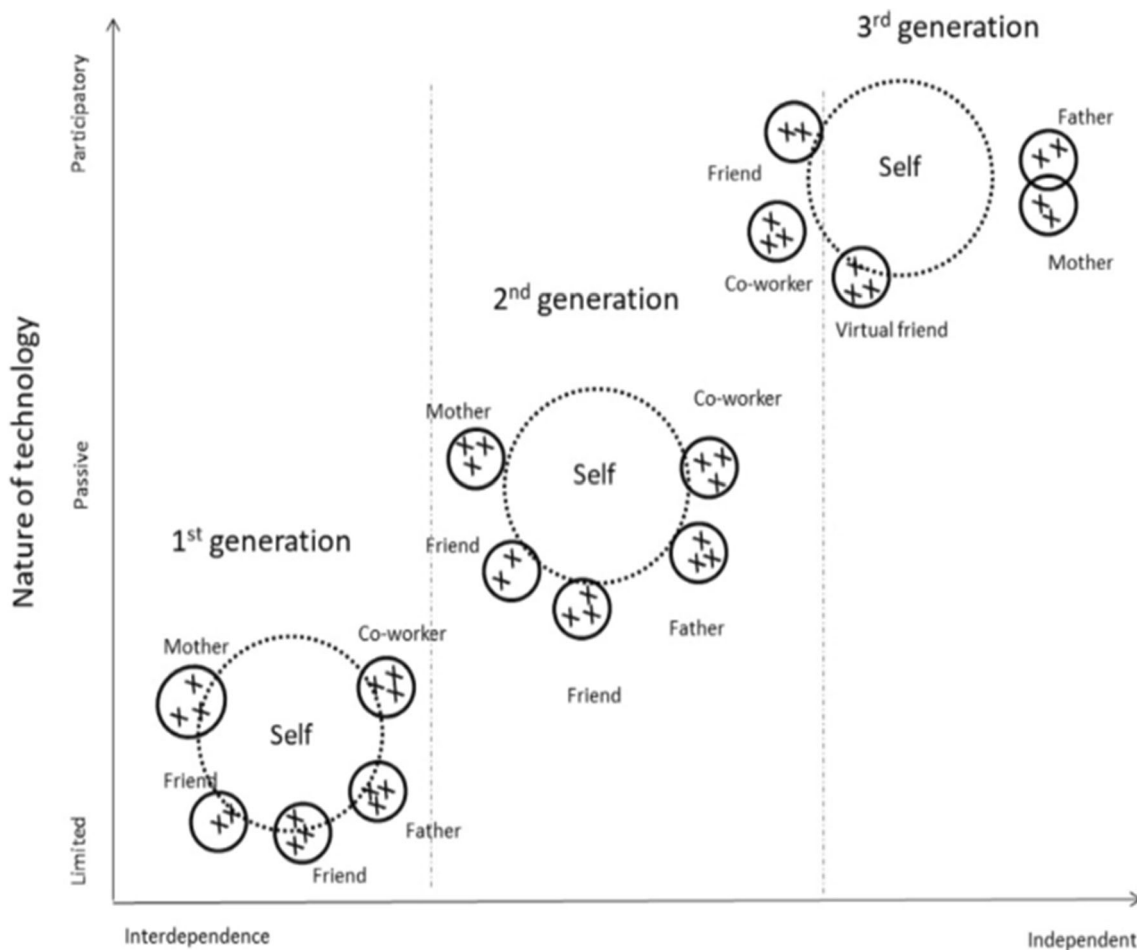


Fig. 1 Techno-self paradigm along interdependent and independent continuum

the extension of Markus and Kityama’s (1991) self-construal, also helps to assess the impact of technology use on South Asian values.

### 8.2 Techno-Construal Matrix

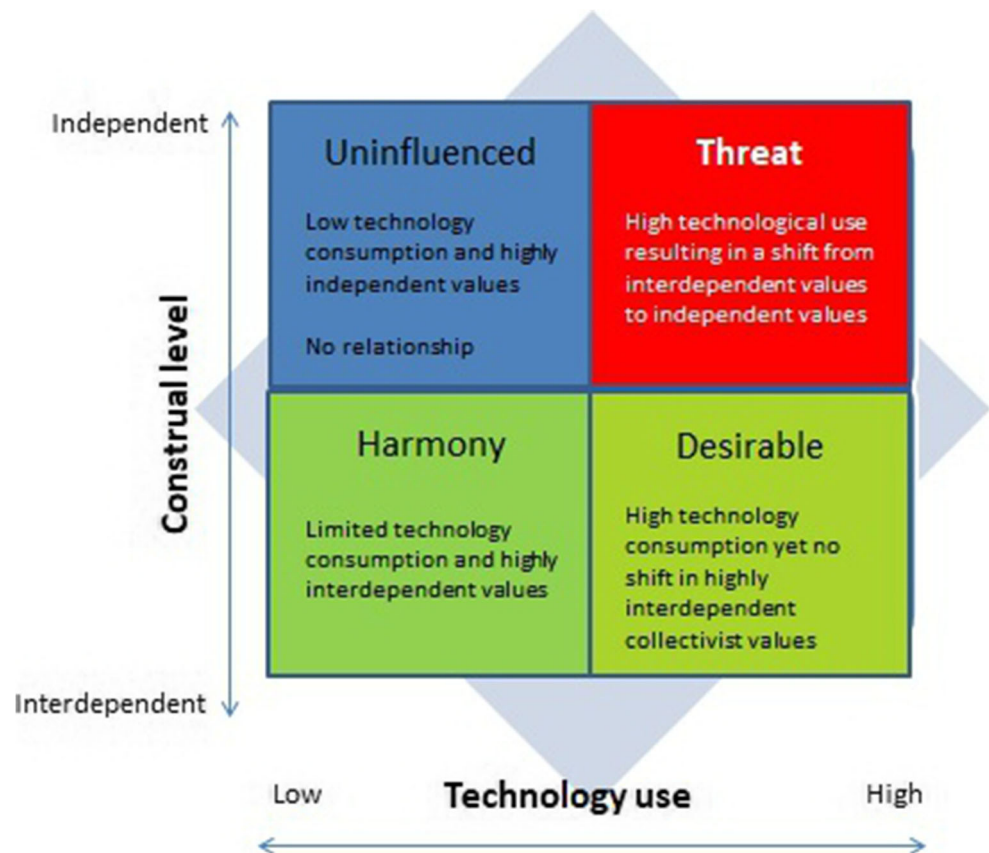
The Techno-construal matrix addresses the relationship between technology use and cultural disposition. Accordingly, this matrix is a generational representation of the findings of this research, whereby the use of children’s technology has incrementally resulted in a shift of the cultural paradigm, from interdependence through to independent values. This matrix also provides understandings of generational insights, for instance, the low technology use and interdependence construal represents ‘Harmony’ that the earlier generations may have experienced in South Asian families, whereby there remained a strong presence of collectivist values with very little technological interactions. The ‘Desirable’ aspect of the matrix represents the third generations, who were more accepting of the technology than third generations due to being raised within the techno era. This generation also did not shift or compromise their cultural values as a result of the technology use. Alternatively, the ‘Threat’ dimension represents an increase of technology use than previous generations, thus resulting in a shift from interdependent values towards more independent

values, which is seen as problematic, disrupting South Asian households.

Therefore, through insights from both second and third generation’s parents, regarding the current generation, it was evident that they each took their place in one of the four categories of the Techo-Construal matrix (Fig.3), with the youngest generation entering into the ‘Threat’ dimension of the matrix. Consequently, this is a representation of the threat technology poses for South Asian parents.

In closing the discussions, the role of children’s technology consumption in British South Asian households was explored through the utilisation of a collectivist value system (Table 1), that pinpointed the central tenants of South Asian lifestyles, thus enabling the study to understand how children’s technology use is interpreted through cultural lenses. Furthermore, the Construal of self was applied to identify how parents view their children’s relationship with others as a consequence of technology use. As a result, the study produced some interesting findings, which further our understanding of South Asian parenting and how culture plays a role in the way technology consumption of children is understood within South Asian families in Britain. Firstly, this research reveals that South Asian parents still predominantly display a strong sense of association to their collectivist values which accompanied their migrating parents and grandparents in the 1960’s. Furthermore, the study demonstrates that South Asian parents

Fig. 2 Techno-construal matrix





view technology use as beneficial for children’s development and educational aspirations, yet as a disruptive agent in the context of the household. Traditionally, in collectivist orientations such as South Asian cultures, it is the norm for decisions, regardless of its nature to be deliberated by elders and family members and contextualised with respects to its impact on significant others (Ayyub 2000). However, parents interpret their children’s use of technology as adjusting their core values from collectivist, to more independent representations, whereby parents and elders are less influential and unable to completely supervise and influence their children’s activities and thus their decisions.

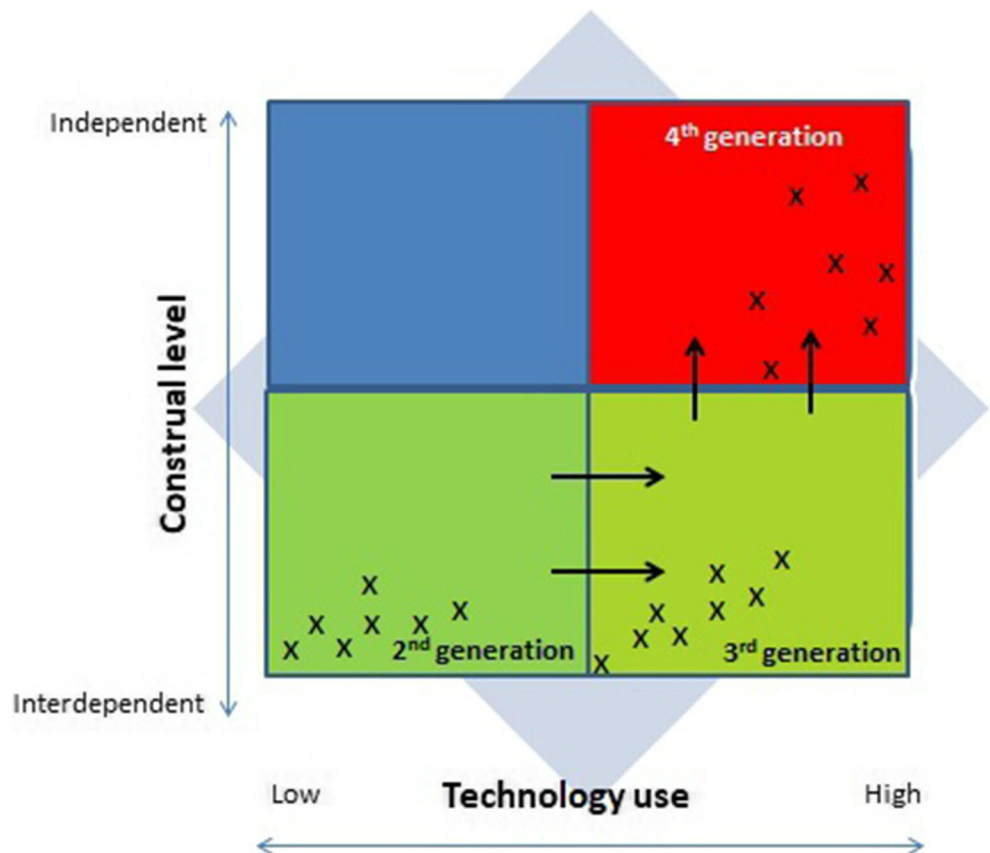
The approach to South Asian socialisation of continuous policing of children and young adults through family members and elders is to maintain and safeguard family honour and ‘izzet’, perceived as of paramount importance in South Asians families (Wardak 2002), much of the technology mediation approaches, whether through trust and openness or even through close monitoring were means to uphold the central tenants of safety, family respect and honour in the community. However this form of socialisation is put at risk due to several factors. The study identified that intergenerational transmission as a result of disparities in media literacy between child and parent has placed parents in an unlikely and uncomfortable situation, whereby the children are the drivers. Furthermore, the difficulties associated with

monitoring children’s technology use and the lack of transparency resulting from the use of multiple media devices has led to an uncertainty that South Asian parents are not accustomed to. Therefore, ultimately, this loss of social control is increasingly allowing children to become more and more independent of the family unit.

### 9 Conclusion

This study set out to explore the dynamics of British South Asian parenting with respects to their children’s technology consumption, thereby contributing further to existing streams of literature dedicated to both British South Asian parenting and children’s technology use. With respects to the contributions of this article, firstly the literature pertaining to South Asian culture was supplemented with literature on children’s technology in order to address and fulfil gaps in the extant research. As a result, two research propositions are recommended for further research to examine South Asian technology mediation from generational gaps, age differences and media literacy perspective. Additionally, this study proposes the *Techno-self paradigm*, an extension to Markus and Kitayama’s (1991) *Construal of self conceptualisation* which depicts how technology impacts values systems and relationships with

Fig. 3 Techno-construal matrix application



significant others. The final and key theoretical contribution of this research is the techno-construal matrix, which addresses the relationship between technology use and cultural disposition from potentially four positions. This matrix therefore can be used as a representational tool to visibly illustrate the relationship between technology use and shifts between the interdependent and independent construals’.

It is worth noting that this research is based on 10 in-depth interviews. Further work to expand the sample size and conduct transgenerational and cross-cultural comparisons would prove highly valuable in enhancing our understanding of the techno-self paradigm. Another limitation of this study was the use of the snowballing sampling method. While this approach was useful in providing us access to hard-to-reach sections of the population (first, second and third generation South Asian parents from a low socio-economic status) and therefore resulting in low external generalisability reliability due to selection bias. Therefore, any inferences made about the meaning of the data can only appropriately be applied internally, and assumptions of its applicability and generalisation to the wider population should be treated tentatively.

In summation, both Lau (2000) and Berthoud (2000) outline that British South Asian families are located on a continuum that ranges from being overtly traditional and hierarchical through to ‘Western’ nuclear families. Current work revealed that while South Asian families are not explicitly moving alongside this spectrum, South Asian children through their use of technology are advancing along this continuum as individuals, resulting from the notion of independence offered through technology use. From a generational perspective, while both second and third generations are still true to their collectivist values and traditional disposition, the latter generation is becoming more disparate, particularly when it comes to their parental attitudes. Whether technology is interpreted as a disruptive or progressive agent appears to depend on both generational dynamics and interdependence-independence synergies. Additionally, given that participants in this study are from different families, the authors propose future South Asian parenting research exploring how South Asian mother and fathers views may differ regarding their children’s technology use. As such, it is proposed for interviewees to be grouped according to their genders and families, with their answers being analysed separately.

## Appendix

**Table 5** Study interview guide

Question types	Questions
Participant demographics	1. Can you tell me a little bit about yourself? 1a. what is your name? 1b. what is your age? 1c. what is your ethnic background? 1d. what religion do you practice? 1e. how long have you lived in the UK? 1 f. what generation immigrant would you class yourself?
Household technology use	2. Could you tell me about the use of technology in your household? 3. How does technology impact your daily life? 4. What types of technology is used?
Children technology use	5. What are your views on your children’s technology use? 6. Does your use of technology differ to your children’s? If so, how? 7. Has your children’s technology use affected their relationship with you? If so, how? 8. How comfortable are you with the latest technology? 9. Do your children know more about technology than you?
Cultural values	10. How important are family values to you? 10a. can you elaborate on each value? 10b. how important is family honour for you? 10c. how important is respecting elders for you? 11. What impact if any, is technology having on these family values? 12. Let’s imagine the next 7 days, your household is technology-free. What would be different?

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## References

- Abu-Laban, S. M. (1974). Arab-Canadian family life. *Arab Studies Quarterly*, 1, 135–156.
- Akpinar, A. (2003). The honour/shame complex revisited: Violence against women in the migration context. *Women's Studies International Forum*, 26(5), 425–442.
- Anderson, C. A., Shibuya, A., Ithori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., Rothstein, H. R., & Saleem, M. (2010). Video game effects on aggression, empathy, and prosocial behavior and eastern and western countries: A meta-analytic review. *Psychological Bulletin*, 136(2), 151–173.
- Abbas, T. (2005). *Muslim Britain: Communities under pressure*. London: Zed Books.
- Austin, E. W., Bolls, P., Fujioka, Y., & Engelbertson, J. (1999). How and why parents take on the tube. *Journal of Broadcasting & Electronic Media*, 43, 175–192.
- Ayyub, R. (2000). Domestic violence in the south Asian Muslim immigrant population in the United States. *Journal of Social Distress and the Homeless*, 9, 237–248.
- Bhattacharya, P. (2016). *Good girls marry doctors: South Asian American daughters on obedience and rebellion*. San Francisco: Aunt Lute books.
- Berthoud, R. (2000). *Family formation in multicultural Britain: Three patterns of diversity* (Working Papers of the Institute for Social & Economic Research, Paper No. 34). Retrieved from <https://www.iser.essex.ac.uk/research/publications/518165>.
- Bornstein, M. H. (2012). Cultural approaches to parenting. *Parenting*, 12(2-3), 212–221.
- Bernard, C., & Shea, J. (2015). *Giving children a voice: The transforming role of the family*. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Boyatzis, R. E. (1998). *Transforming qualitative information*. Cleveland: Sage.
- Brackertz, N., Zwart, I., Meredyth, D., & Ralston, L. (2005). Community consultation and the 'hard to reach': Concepts and practice in Victorian local government. Main report. Melbourne: Institute for Social Research, Swinburne University of Technology Retrieved from [http://www.sisr.net/cag/docs/HardtoReach\\_main.pdf](http://www.sisr.net/cag/docs/HardtoReach_main.pdf).
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Breland, J. Y., Fox, A. M., & Horowitz, C. R. (2013). Screen time, physical activity and depression risk in minority women. *Mental Health and Physical Activity*, 6(1), 10–15.
- Browne, K. (2005). Snowball sampling: Using social networks to research non-heterosexual women. *International Journal of Social Research Methodology*, 8(1), 47–60.
- Buijzen, M., & Valkenburg, P. M. (2005). Parental mediation of undesired advertising effects. *Journal of Broadcasting & Electronic Media*, 49, 153–165.
- Campbell, E. (2016). Policing paedophilia: Assembling bodies, spaces and things. *Crime, Media, Culture: An International Journal*, 12(3), 345–365.
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: understanding Chinese parenting through the cultural notion of training. *Child Development*, 65, 1111–1119.
- Chen, J. V., Yen, D. C., Pompriphret, W., & Widjaja, A. E. (2015). E-commerce web site loyalty: A cross cultural comparison. *Information Systems Frontiers*, 17(6), 1283–1299.
- Christine, S. (2007). *Religious and ethnic variation among second-generation Muslim Americans* (doctoral dissertation). University of Arizona, Tucson.
- Clark, L. S. (2011). Parental mediation theory for the digital age. *Communication Theory*, 21, 323–343.
- Corinne, L., & Županov, I. G. (2012). Introduction: Cultural dialogue in south asia and beyond: Narratives, images and community (sixteenth-nineteenth centuries). *Journal of the Economic and Social History of the Orient*, 55(2-3), 215–219.
- Correa, T. (2014). Bottom-up technology transmission within families: Exploring how youths influence their parents' digital media use with dyadic data. *Journal of Communication*, 64(1), 103–124.
- Correa, T. (2015). The power of youth: How the bottom-up technology transmission from children to parents is related to digital (in)equality. *International Journal of Communication*, 9, 1163–1186.
- Cross, S. E., Hardin, E. E., & Gercek-Swing, B. (2011). The what, how, why, and where of self-construal. *Personality and Social Psychology Review*, 15(2), 142–179.
- Dabla, A. (2004). The role of IT policies in promoting social and economic development: The case of the state of Andhra Pradesh, India. *EJISDC*, 19(5), 1–21.
- Dahya, B. (1974) The nature of Pakistani ethnicity in industrial cities in Britain. *Urban Ethnicity Ed. Cohen, A* (Tavistock, London) 77–118.
- Das Gupta, M. (1997). What is Indian about you?: A gendered transnational approach to ethnicity. *Gender and Society*, 11(5), 572–596.
- De Mol, J., Lemmens, G., Verhofstadt, L., & Kuczynski, L. (2013). Intergenerational transmission in a bidirectional context. *Psychologica Belgica*, 53, 7–23.
- De Wit, L., van Straten, A., Lamers, F., Cuijpers, P., & Penninx, B. (2011). Are sedentary television watching and computer use behaviors associated with anxiety and depressive disorders? *Psychiatry Research*, 186(2), 239–243.
- Dion, K. K., & Dion, K. L. (2004). Gender, immigrant generation, & ethnocultural identity. *Sex Roles*, 50(5), 347–355.
- Dodd, P. C. (1973). Family honor and the forces of change in Arab society. *International Journal of Middle East Studies*, 4(1), 40–54.
- Ethnicity and National Identity in England and Wales (2011). In *Ethnicity*. Retrieved from <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/ethnicity>
- Ferguson, C. J. (2013). Violent video games and the supreme court. *American Psychologist*, 68, 57–74.
- Fiske, A., Kitayama, S., Markus, H. R., & Nisbett, R. E. (1998). The cultural matrix of social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology (1915–981)*. New York: McGraw-Hill.
- Forehand, R., & Long, N. (2010). *Parenting the strong-willed child* (3rd ed.). New York: McGraw-Hill.
- Franceschelli, M., & O'Brien, M. (2014). 'Islamic capital' and family life: The role of Islam in parenting. *Sociology*, 48(6), 1190–1206.
- Gentile, D. A., Reimer, R. A., Nathanson, A. I., Walsh, D. A., & Eisenmann, J. C. (2014). Protective effects of parental monitoring of children's media use: A prospective study. *JAMA Pediatrics*, 168, 479–484.
- Ghosh, R. (1984). South Asian women in Canada: Adaptation. In R. Kanungo (Ed.), *South Asians in the Canadian Mosaic* (pp. 145–155). Montreal: Kala Bharati.
- Gold, J. (2015). *Screen-smart parenting: How to find balance and benefit in your child's use of social media, app and digital devices*. New York City: Guilford Publications.

- Görzig, A., & Frumkin, L. A. (2013). Cyberbullying experiences on-the-go: When social media can become distressing. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 7(1), 4.
- Granic, I., Lobel, A. M., & Engels, R. C. M. E. (2014). The benefits of playing video games. *American Psychologist*, 69(1), 66–78.
- Greenfield, P. M., Keller, H., Fulungi, A., & Maynard, A. (2003). Cultural pathways through universal development. *Annual Review of Psychology*, 54, 461–490.
- Gulati, R.K., & Kaur, M (2017) Information and communication technologies (ICTs) for inclusive human development: A review. *International Journal of Emerging Research in Management & Technology* 6 (10).
- Ghuman, P. A. S. (2003). *Double loyalties: South asian adolescents in the west*. Cardiff: University of Wales Press.
- Gutnick, A. L., Robb, M., Takeuchi, L., & Kotler, J. (2010). *Always connected: The new digital media habits of young children*. New York: The Joan Ganz Cooney Center at Sesame Workshop.
- Haddad, Y. Y., Smith, J. I., & Moore, K. M. (2006). *Muslim women in America the challenge of Islamic identity today*. New York: Oxford University Press.
- Hargittai, E. (1999). Weaving the Western web: Explaining differences in internet connectivity among OECD countries. *Telecommunications Policy*, 23, 701–718.
- Harwood, R. L., Schoelmerich, A., Schulze, P. A., & Gonzalez, Z. (1999). Cultural differences in maternal beliefs and behaviors: A study of middle-class anglo and puerto rican mother-infant pairs in four everyday situations. *Child Development*, 70(4), 1005–1016.
- Hamilton, F., & Swerling, G. (2018) Police told to halt rise of paedophile hunters. *The Times*.
- Hickey, M. G. (2004). Identity negotiation in narratives of Muslim women immigrants in the United States: ‘So things are different. . . doesn’t mean they’re wrong’. *Asian women*, 19, 1–18.
- Hines, P. M., Garcia-Preto, N., McGoldrick, M., Almeida, R., & Weltman, S. (1992). Intergenerational relationships across cultures. *Families in Society*, 73(6), 323–337.
- Hopkins, N., Tate, M., Sylvester, A., & Johnstone, D. (2017). Motivations for 21st century school children to bring their own device to school. *Information Systems Frontiers*, 19(5), 1191–1203.
- Hsu, F. L. K. (1948). *Under the ancestor's shadow: Chinese culture and personality*. New York: Columbia University Press.
- Huang, L. C., & Harris, M. B. (1973). Conformity in Chinese and Americans: A field experiment. *Journal of Cross-Cultural Psychology*, 4, 427–434.
- Hughes, D., Rodriguez, J., Smith, E. P., Johnson, D. J., Stevenson, H. C., & Spicer, P. (2006). Parents’ ethnic-racial socialization practices: A review of research and directions for future study. *Developmental Psychology*, 42(5), 747–770.
- Iqbal, H. (2014). Multicultural parenting: Preparation for bias socialisation in british south asian and white families in the UK. *International Journal of Intercultural Relations*, 43, 215–226.
- Iqbal, H., & Golombok, S. (2018). The generation game: Parenting and child outcomes in second-generation south asian immigrant families in britain. *Journal of Cross-Cultural Psychology*, 49(1), 25–43.
- Jaspal, R., & Coyle, A. (2010). “My language, my people”: Language and ethnic identity among British-born South Asians. *South Asian Diaspora*, 2(2), 201–218.
- Jaspal, R., & Cinnirella, M. (2012). The construction of ethnic identity: Insights from identity process theory. *Ethnicities*, 12(5), 503–530.
- Johnson, F. (1985). The Western concept of self. In A. Marsella, G. De Vos, & F. L. K. Hsu (Eds.), *Culture and self* London: Tavistock.
- Kallivayalil, D. (2004). Gender and cultural socialization in Indian immigrant families in the United States. *Feminism Psychological*, 4(4), 535–559.
- Kim, D. J. (2008). Self-perception-based versus transference-based trust determinants in computermediated transactions: A cross-cultural comparison study. *Journal of Management Information Systems*, 24, 13–45.
- Kim, H., & Markus, H. R. (1999). Deviance or uniqueness, harmony or conformity?: A cultural analysis. *Journal of Personality and Social Psychology*, 77(4), 785–800.
- Kirwil, L. (2009). Parental mediation of children’s internet use in different European countries. *Journal of Children and Media*, 3, 394–409.
- Klein, H., & Myers, D. (1999). A set of principles for conducting evaluating interpretive field studies in information systems. *MIS Quarterly*, 23(1), 67–94.
- Kuczynski, L. (2003). Beyond bidirectionality: Bilateral conceptual frameworks for understanding dynamics in parent-child relations. In L. Kuczynski (Ed.), *Handbook of dynamics in parent-child relations* (pp. 1–24). Thousand Oaks: SAG.
- Lau, A. (Ed.). (2000). *South Asian children and adolescents in Britain*. London: Whurr.
- Lee, S., & Chae, Y. (2007). Children’s internet use in a family context: Influence on family relationships and parental mediation. *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*, 10(5), 640–644.
- Lemola, S., Brand, S., Vogler, N., Perkinson-Gloor, N., Allemand, M., & Grob, A. (2011). Habitual computer game playing at night is related to depressive symptoms. *Personality and Individual Differences*, 51, 117–122.
- LeVine, R. (1980). Across-cultural perspective on parenting. In M. D. Fantini & R. Cardenes (Eds.), *Parenting in a multicultural society* (pp. 17–26). New York: Longman.
- Ling, R. (2000). “We will be reached”: The use of mobile telephony among Norwegian youth. *Information Technology & People*, 13(2), 102–120.
- Liou, S. R., Tsai, H. M., & Cheng, C. Y. (2013). Acculturation, collectivist orientation and organisational commitment among Asian nurses working in the US healthcare system. *Journal of Nursing Management*, 21, 614–623.
- Livingstone, S., & Helsper, E. J. (2008). Parental mediation of children’s internet use. *Journal of Broadcasting & Electronic Media*, 52, 581–599.
- Maiter, S., & George, U. (2003). Understanding context and culture in the parenting approaches of immigrant south asian mothers. *Affilia*, 18(4), 411–428.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224–253.
- Markus, H. R., Mullally, P., & Kitayama, S. (1997). Selfways: Diversity in modes of cultural participation. In U. Neisser & D. A. Jopling (Eds.), *The conceptual self in context: Culture, experience, self-understanding* (pp. 13–61). Cambridge: Cambridge University Press.
- Marsella, A., De Vos, G., & Hsu, F. L. K. (1985). *Culture and self* London: Tavistock.
- Marshall, S. J., Biddle, S. J. H., Gorely, T., Cameron, N., & Murdey, I. (2004). Relationships between media use, body fatness and physical activity in children and youth: A meta-analysis. *International Journal of Obesity*, 28(10), 1238–1246.
- Meade, R. D., & Barnard, W. (1973). Conformity and anticonformity among Americans and Chinese. *Journal of Social Psychology*, 89, 15–25.
- McQueen, A., Cress, C., & Tothy, A. (2012). Using a tablet computer during pediatric procedures: A case series and review of the “apps”. *Pediatric Emergency Care*, 28(7), 712–714.
- Milani, L., Camisasca, E., Caravita, S. C. S., Ionio, C., Miragoli, S., & Di Blasio, P. (2015). Violent video games and Children’s aggressive behaviors: An italian study. *SAGE Open*, 5(3), 215824401559942.

- Miller, J. G. (1988). Bridging the content-structure dichotomy: Culture and the self. In M. H. Bond (Ed.), *The cross-cultural challenge to social psychology*. Beverly Hills, CA: Sage.
- Naidoo, J. C. (1984). South Asian women in Canada: Self-perceptions, socialization, achievement aspirations. In R. Kanungo (Ed.), *South Asians in the Canadian Mosaic* (pp. 123–142). Montreal: KalaBharati.
- Nazroo, J. Y. (2006). *Health and social research in multicultural societies*. Abingdon: Routledge.
- Nikken, P., & Jansz, J. (2006). Parental mediation of children's videogame playing: A comparison of the reports by parents and children. *Learning, Media and Technology*, 31(2), 181–202.
- Nikken, P., & Jansz, J. (2014). Developing scales to measure parental mediation of young children's internet use. *Learning, Media and Technology*, 39, 250–266.
- Norasakkunkit, V., & Kalick, S. M. (2002). Culture, ethnicity, and emotional distress measures: The role of self-construal and self-enhancement. *Journal of Cross-Cultural Psychology*, 33(1), 56–70.
- Ofcom. (2014). *The communications market report*. Retrieved February 8, 2018, from [http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/2014\\_UK\\_CMRF.pdf](http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/2014_UK_CMRF.pdf).
- Office for National Statistics (2016). *Bradford Local Area Report*. London; UK Statistics Authority.
- Page, A. S., Cooper, A. R., Griew, P., & Jago, R. (2010). Children's screen viewing is related to psychological difficulties irrespective of physical activity. *Pediatrics*, 126(5), 1011–1017.
- Palvia, P., Baqir, N., & Nemati, H. (2017). ICT for socio-economic development: A citizens "perspective". *Information & Management*. <https://doi.org/10.1016/j.im.2017.05.003>.
- Pande, R. (2014). Geographies of marriage and migration: Arranged marriages and south Asians in Britain. *Geography Compass*, 8(2), 75–86.
- Paiva, N. D. (2008). South asian parents' constructions of praising their children. *Clinical Child Psychology and Psychiatry*, 13(2), 191–207.
- Papadopoulos, C., Foster, J., & Caldwell, K. (2012). Individualism-collectivism' as an explanatory device for mental illness stigma. *Community Mental Health Journal*, 48, 1–11.
- Papadopoulos, C., Leavey, G., & Vincent, C. (2002). Factors influencing stigma: A comparison of Greek-Cypriot and English attitudes towards mental illness in North London. *Social Psychiatry and Psychiatric Epidemiology*, 37, 430–434.
- Powers, W. (2010). *Hamlet's blackberry: A practical philosophy for building a good life in the digital age*. New York: HarperCollins Report for the Center on Media and Human Development School of Communication Northwestern.
- Radesky, J. S., Schumacher, J., & Zuckerman, B. (2015). Mobile and interactive media use by young children: the good, the bad, and the unknown. *Pediatrics*, 135(1), 1–3.
- Radesky, J. S., Peacock-Chambers, E., Zuckerman, B., & Silverstein, M. (2016). Use of Mobile technology to calm upset children: Associations with social-emotional development. *JAMA Pediatrics*, 170(4), 397–399.
- Rideout, V. J. (2013). *Zero to eight: Children's media use in America 2013*. San Francisco: Common.
- Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). Generation M2: Media in the lives of 8- to 18-year-olds. Henry J. Kaiser Family Foundation.
- Rithika, M., & Selvaraj, S. (2013). Impact of social media on students' academic performance. *International Journal of Logistics and Supply Chain Management Perspective*, 2(4), 636–640.
- Rouis, S., Limayem, M., & Salehi-Sangari, E. (2011). Impact of Facebook usage on students' academic achievement: role of self-regulation and trust. *Electronic Journal of Research in Educational Psychology*, 9(3), 961–994.
- Robinson, L. (2009). Cultural identity and acculturation preferences among south asian adolescents in Britain: *An exploratory study*. *Children & Society*, 23(6), 442–454.
- Salemink, K., Strijker, D., & Bosworth, G. (2017). Rural development in the digital age: A systematic literature review on unequal ICT availability, adoption, and use in rural areas. *Journal of Rural Studies*, 54(2017), 360–371.
- Salvation, M., & Adzharuddin, N. A. (2014). The influence of social network sites (SNS) upon Academic Performance of Malaysian Students. *International Journal of Humanities and Social Sciences*, 4(10), 131–137.
- Sanders, W., Parent, J., Forehand, R., Sullivan, A. D. W., & Jones, D. J. (2016). Parental perceptions of technology and technology-focused parenting: Associations with youth screen time. *Journal of Applied Developmental Psychology*, 44, 28–38.
- Shin, W., & Ismail, N. (2014). Exploring the role of parents and peers in young adolescents' risk taking on social networking sites. *Cyberpsychology, Behavior and Social Networking*, 17, 578–583.
- Shapurian, R., & Hojat, M. (1985). Sexual and premarital attitudes of Iranian college students. *Psychological Reports*, 57(1), 67–74.
- Shaw A., & Lee, S. (2003) Kinship and continuity: Pakistani families in Britain. *Journal of ethnic and migration studies*. 29, 924–925.
- Shin, W., & Li, B. (2017). Parental mediation of children's digital technology use in Singapore. *Journal of Children and Media*, 11(1), 1.
- Shweder, R. A., & Bourne, E. J. (1984). Does the concept of the person vary cross-culturally? In R. A. Shweder & R. A. LeVine (Eds.), *Culture theory: Essays on mind, self, and emotion* (pp. 158–199). Cambridge, England: Cambridge University Press.
- Smith, P. B., & Bond, M. H. (1993). *Social psychology across cultures: Analysis and perspectives*. New York: Harvester Wheatsheaf.
- Nisbett, R. E., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic vs. analytic cognition. *Psychological Review*, 108, 291–310.
- Shaghghi, A., Bhopal, R. S., & Sheikh, A. (2011). Approaches to recruiting 'hard-to-reach' populations into re-search: A review of the literature. *Health Promotion Perspective*, 1(2), 86–94.
- Smedts, G. (2008). Parenting in a technological age. *Ethics and Education*, 3(2), 121–134.
- Tonsing, J., & Bam, R. (2017). Intimate partner violence in south asian communities: Exploring the notion of 'shame' to promote understandings of migrant women's experiences. *International Social Work*, 60(3), 628.
- Triandis, H. C. (1994). *Culture and social behavior*. New York: McGraw-Hill.
- Trommsdorff, G. (2009). Intergenerational relations and cultural transmission. In U. Schonpflug (Ed.), *Cultural transmission: Psychological, developmental, social, and methodological aspects* (pp. 126–160). Cambridge: Cambridge University Press.
- Umaña-Taylor, A. J. (2004). Ethnic identity and self-esteem: Examining the role of social context. *Journal of Adolescence*, 27(2), 139–146.
- Van den Bergh, B. (1998). Kindbeeld in context: Wisselwerking tussen de maatschappelijke en wetenschappelijke benadering van kinderen [the image of the child in context. Mutuality between the social and scientific approach of children]. *Ethiek en maatschappij*, 4, 92–115.
- Varghese, A., & Rae Jenkins, S. (2009). Parental overprotection, cultural value conflict, and psychological adaptation among asian indian women in america. *Sex Roles*, 61(3–4), 235–251.
- Wake, M., Hesketh, K., & Waters, E. (2003). Television, computer use and bodymass index in Australian primary school children. *Journal of Paediatrics and Child Health*, 39(2), 130–134.
- Wakil, P., Siddique, C. M., & Wakil, F. A. (1981). Between two cultures: A study in socialization of children of immigrants. *Journal of Marriage and the Family*, 43(4), 931–940.
- Walsham, G. (1995). The emergence of interpretivism in IS research. *Information Systems Research*, 6(4), 376–394.

- Wardak, A. (2002). *'Jigra: Power and traditional conflict resolution in Afghanistan' in law after ground zero edited by John Strawson*. London: Cavendish.
- Wartella, E., Rideout, V., Lauricella, A., & Connell, S. (2013). Parenting in the Age of Digital Technology: A National Survey. Report of the Center on Media and Human Development, School of Communication, Northwestern University.
- Wintour, P. (2008). Parents to be shown how to protect children online. New codes of practice for social network sites and video games. *The Guardian*, 27, 1–2.
- Yang, K. S. (1981). Social orientation and individual modernity among Chinese students in Taiwan. *Journal of Social Psychology*, 113, 159–170.
- Zaidi, A. U., Couture-Carron, A., & Maticka-Tyndale, E. (2016). Should I or should I not?: An exploration of south asian youth's resistance to cultural deviancy. *International Journal of Adolescence and Youth*, 21(2), 232.
- Zaman, B., Nouwen, M., Vanattenhoven, J., de Ferrerre, E., & Van Looy, J. (2016). A qualitative inquiry into the contextualized parental mediation practices of young children's digital media use at home. *Journal of Broadcasting & Electronic Media*, 60, 1–22.
- Zheng, L. (2017). Does online perceived risk depend on culture? individualistic versus collectivistic culture. *Journal of Decision Systems*, 26(3), 256–274.
- Zhang, X., & Maruping, L. M. (2008). Household technology adoption in a global marketplace: Incorporating the role of espoused cultural values. *Information Systems Frontiers*, 10(4), 403–413.
- Zillmann, D., Bryant, J., & Huston, A. C. (2013). *Media, children, and the family: Social scientific, psychodynamic, and clinical perspectives*. Hillsdale: L. Erlbaum Associates.
- Zimmerman, F. J., & Christakis, D. A. (2007). Associations between content types of early media exposure and subsequent attentional problems. *Pediatrics*, 120(5), 986–992.
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