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Postmodern society and the individual: The structural characteristics of postmodern society and how they shape who we think we are

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## Abstract

The notion that personality is pluralistic and not a rigid construct is widely acknowledged within the social sciences. However, factors affecting multiplicity outside of clinical enquiry are still poorly understood. The idea that postmodern society has influenced how the individual conceives of their self-concept is frequently discussed, however, seldom theorised and empirically inspected. This study tests a number of psycho-sociological hypotheses that being immersed within consumption and part of a technology-based culture are contributing factors to self-pluralism. Data is collected from 201 individuals living in postmodern societies. Results indicate that technology exposure and materialistic beliefs are related to levels of self-pluralism and that materialism plays a partial mediatory role in technology's influence on multiplicity. These findings add support to postmodern understandings of the self and society and show everyday experiences associated with modern living influence how one conceives of their identity.

**Keywords:** Materialism; Multiplicity; Postmodernity; Self-concept; Technology.

## 1. Introduction

Self-concept research demonstrates the importance and intricacy an understanding of the 'self' has on regulating one's behaviour (Gergen, 1972). It is therefore crucial to appreciate what enduring social factors may contribute to one's construction of a plural 'self'. Under the framework of Lester's (2010) multiple self-theory of personality, it is suggested that not every individual has a multiple self. Thus, understanding potential factors influencing individual differences of multiplicity is essential. In line with this, we consider whether everyday experiences account for variation in self-coherence. Notions of multiple selves may vary subtly in their definition, however each assumes the core underlying idea that the self is a plural and fluid entity with no rigid form of identity. Much research based on this premise demonstrates that individuals deemed interpersonally changeable (pluralistic) are relatively more neurotic, depressed, anxious, and are more likely to suffer from some form of childhood stress (Donahue, Robins, Roberts, & John, 1993; Lester, 1992; Rosenberg, 1979).

The presence of multiplicity, whether diminutive or extensive, is not a new idea (James, 1890). However, contemporary self-consistency research provides reason to question multiplicity as an isolated psychiatric condition, and it emerges that multiplicity is more appropriately conceptualised as being a continuum feature of an individual's 'normal' psychology; psychiatric manifestations being at one extreme of this continuum. Traditionally dominant personality models such as self-schema theory (Markus, 1977) are questioned and evidence presented supporting alternative theories. Conceptions such as 'possible selves' (Markus & Nurius, 1986) and self-categorization theory (Turner, 1999) suggest the self is far from immutable but instead highly variable and context-dependent. Important to these ideas are individual differences between subjects and how these relate to the very nature and complexity of one's array of possible selves (Markus & Nurius, 1986). This 'pluralistic renaissance' has led a number of researchers to recognise the existence of pluralism in the

‘normal’ population (Calinescu, 1991; Boone, 1996; McReynolds, Altrocchi, & House, 2000). Individual differences research shows self-pluralism generally decreases with age (Altrocchi & McReynolds, 1997; McReynolds et al, 2000), and is stable across sexes (Lester, 2007; McReynolds et al., 2000; Rosenberg, 1979). Lester (2007) finds self-monitoring is positively associated with self-pluralism scores, which suggests such individuals are more likely to take their cues from situational and social resources. Further research by Butzer and Kuiper (2006) support this claim that individuals who are deemed to be more pluralistic are more likely to make outward social comparisons. This introduces the idea that individual differences are crucial to understanding self-consistency because it recognises that incongruence of the self may be reflective of inconsistencies found in one’s cultural surroundings.

Everyday factors which may provoke self-pluralism have been somewhat neglected. There is, therefore, a need to investigate possible intra-cultural factors that demonstrate self-pluralism variability. The current break in socioeconomic organisation, often referred to as ‘postmodernity’, is a plausible starting point. As Rappoport, Baumgardner, and Boone (1999) highlight, with any significant cultural shift changes in self understanding will also be evident. Postmodern culture lays down a contextual underpinning which emphasises diversity or ‘fluidity’ over universality or ‘rigidity’ (Bauman, 2000); an age where reflexivity is a founding principle of contemporary epistemology. Postmodern theories advocate that there is no objective view of the world, merely constructed meanings (Lester, 2010). Subsequently, some writers propose it is exposure to these salient features that can account for the construction of multiplicity being a spectral phenomenon among individuals (Gergen, 2000b). In light of these widely recognised ideas, we test constructs that are often discussed but rarely subjected to empirical scrutiny.

In the context of this research, ‘postmodernism’ is defined as the dominant structural novelties that characterise it: advancements in technologies (Gergen, 2000b) and conspicuous consumption (Featherstone, 2007). As follows, this study aims to introduce a parsimonious yet workable model to illustrate the relationship between self-pluralism, technology use, and materialistic beliefs.

### *1.1. Postmodern technologies and self-pluralism*

Social saturation from technology use can be thought to ultimately increase one’s exposure to multiple points of view. The social groups to which individuals can now belong via technological transformation are varied and contradictory and a multiple self is arguably required (Gergen, 2000a). For example, saturating pluralistic qualities, such as video games, can be found in interactive technologies whereby a player is submersed in ‘simulacra’ or hyper-realities (Kingsepp, 2007). The Internet’s rise also exposes individuals to a wealth of contradicting knowledge and information. Online interaction has been shown to promote a ‘cyber-self’ which individuals use to enact a multiplicity of selves (Waskul & Douglass, 1997). Scrase (2002) also highlights tensions between stable cultural maintenance identities and consumerist varieties and non-national images that appear with regularity on television.

### *1.2. Materialism and self-pluralism*

Drawing on Belk’s (1988) seminal paper, it is argued that the symbolic meanings associated with objects of consumption are utilised to construct one’s identity. Consumer-orientated individuals’ identities are heavily anchored in the stability of meanings that are culturally attached to objects. Featherstone (2007) proposes that the multitude of symbolic meanings attached to objects offer transient symbol combinations that contribute to identity; this transient nature lying within changing fashion mechanisms and advertising (Klein, 2000).

It is also emphasised that materialistic people generally consume more and have stronger emotional and identity-related buying motivations, suggesting the association between consuming and self-concept is stronger for more materialistically orientated individuals (Dittmar, 2005; Dittmar, Long, & Meek, 2004).

### *1.3. Postmodern technologies and materialism*

Relying on cultivation theory, which elucidates that TV viewing influences the viewer through repetitive images and themes (Gerbner, Cross, Morgan, & Signorielli, 1994), O'Guinn and Shrum (1997) assess the frequency of dominant values portrayed on television and find materialism is a frequent and favourable value. A number of studies provide supportive evidence and show TV viewing, media exposure, and TV advertising are positively related to materialism (Shrum, Burroughs, & Rindfleisch, 2005; Sirgy et al., 1998). Bush and Gilbert (2002) and Mukerji (1983) point out that even other mediums of advertising, like the internet and a basic reliance on technology, are also related with levels of materialism.

## 2. Method

### *2.1. Participants*

The sample consists of 201 voluntary respondents with an age range of 13-75 ( $M = 34.7$ ,  $SD = 16.9$ , 41% female). All participants are from Western postmodern cultures; 97% British and 3% North American. Participants are defined as from a 'normal' population in terms of their levels of multiplicity. Sample characteristics are comparable to previous uses of the scale on 'normal' populations (i.e.,  $M = 3.9$  for previous studies,  $M = 4.1$ ).

## 2.2. Measures

### *General technology exposure scale (GTE)*

GTE is assessed through levels of TV viewing (Schmitz et al., 2004), computer use (Schmitz et al., 2004), internet use (Teo & Lim, 1999), videogame exposure, and general computer use. All questions use frequency based response scales (“Never” to “Rarely”, or “0-1 hours” to “6-7 hours”). Examples of such questions include “How many hours of TV do you watch on an average weekday?”, “How often do you use the Internet?”, “How many years have you been using the Internet for?” Composite scores are obtained by standardising and summing all technologies to give an overall ‘General technology exposure’ variable. Internal consistency is computed for GTE and obtained adequate levels of Alpha ( $\alpha = .7$ ,  $SD = .47$ ,  $SE = .04$ ,  $CI = .63-.77$ ). Due to statistical limitations of Alpha (Shevlin, Miles, Davies, & Walker, 2000) all Alpha’s are reported alongside  $SD$ ,  $SE$ , and  $CI$  [95%].

### *Materialistic values scale (MVS)*

To assess individuals’ orientation towards consumerism, the materialistic values scale (MVS) is used (Richins & Dawson, 1992). Based on qualitative research, Richins and Dawson define materialism as “... the importance ascribed to the ownership and acquisition of material goods in achieving major life goals or desired states” (Richins, Mick, & Monroe, 2004, p. 210). This is important for this study as it allows for measures of adherence to consumer values and lifestyle over simply measuring rates of consumption. A short version of the scale is employed for practical reasons, including reducing demand effects or hypothesis guessing. The MVS short form consists of 15 statements, including “I admire people who own expensive homes, cars, and clothes”, “I try to keep my life simple, as far as possessions are concerned”, and “I’d be happier if I could afford to buy more things”. Respondents are asked about the extent to which they agree with each statement on a 5-point

Likert scale ranging from “strongly disagree” to “strongly agree”. The MVS demonstrates adequate dimensionality, construct validity, and internal consistency (Richins et al., 2004). Coefficient Alpha for the current study was particularly high ( $\alpha=.91$ ,  $SE=.01$ ,  $SD=.13$ ,  $CI=.89-.93$ ) with mean inter-item correlations of .4.

### *Self-pluralism scale (SPS-10)*

The self-pluralism scale (SPS-10) was developed by McReynolds et al. (2000) as a measure of self-perceived variability in self-concept. Self-pluralism is conceptualized as “the degree to which one perceives oneself as typically feeling, behaving, and being different, in different situations, and at different times” (McReynolds et al., 2000, p.349). The SPS-10 consists of 10 true or false statements expressing how individuals see themselves. Statements include “People who know me well would say I’m pretty predictable”, “I’m the same sort of person regardless of who I’m with”, and “I get along best when I act and feel like a totally different person”. The SPS-10 was tested on a normative group and displayed evidence for uni-dimensionality, construct validity, internal consistency and test-retest reliability (McReynolds et al., 2000). These reveal internal consistency ( $\alpha=.90$ ) and strong test-retest qualities (one month retest =.88; ten month retest =.84). Internal consistency for the current study yields a high value ( $\alpha=.86$ ,  $SD=.21$ ,  $SE=.02$ ,  $CI=.83-.89$ ), with mean inter-item correlations of .38.

### *2.3. Procedure*

A self-report questionnaire was used that incorporated a simple mediation model assessing the direct path between general technology exposure (GTE) and self-pluralism, and an indirect path with materialism as a mediator of the GTE/self-pluralism relationship. Questionnaires were constructed using an online survey website that allowed for the creation

of a web ‘link’ which took individuals first to an informed consent page and then to the questionnaire. The link was mainly posted on general discussion forums with a few placed on consumer forums and gaming/gadget forums. A brief description of the project as a ‘technology and personality survey’, along with an estimated completion time (10-15mins) was posted. All posts were kept the same to ensure consistency with recruiting and the whole project was conducted adhering to BPS ethical guidelines.

#### *2.4. Power analysis*

Due to limited previous research, a priori power analysis based on existing research was difficult. To compensate for this, we examined typical effect sizes found between the self-pluralism scale used and standard self-concept measures, as well as broad personality measures. Effect sizes (*ES*) ranged dramatically from .09-.45 (*r*), and on the grounds of ensuring adequate levels of power, the lower estimate effect size (.09) was employed. In line with Cohen’s (1992) recommended level of power (0.8), an optimal sample size of 187 was required as calculated using GPower© (Erdfelder, Faul, & Buchner, 1996) (given  $\alpha = 0.05$ , power = 0.8, and *ES* = 0.09).

### 3. Results

#### *3.1. Preliminary analyses*

Scores on the self-pluralism scale indicate that individuals taken from a ‘normal’ population vary in terms of how consistent they see their self-concept. The majority of individuals’ scores are spread along the stable/plural continuum, with the mean pluralism score of 4.1 (*SD* = 3.32) out of a possible range of 0-10. Correlational analyses show general technology exposure (GTE) to be significantly related to both self-pluralism and materialism scores (see Table 1). Overall, correlational findings provide evidence for our hypotheses.

(Please insert Table 1 about here.)

Before mediator and hierarchical regression analyses are performed, a pairwise deletion process was used resulting in  $N = 201$ . Assumptions of multicollinearity are assessed through the correlation matrix (Table 1), tolerance indicators, and variance inflation factors, which all confirm little multicollinearity. Examination of normal probability plots and scatterplots of standardised residuals demonstrate no major deviation from normality, no outliers, or evidence of curvilinear relationships (Tabachnick & Fidell, 2001). Moderator results demonstrate non-significance (Table 2), this suggests no interaction effect is occurring and that a mediation model is a better fit for the data, therefore, the mediator findings are focused on in this section.

### 3.2. Mediator analyses

The main analyses for a mediator effect are in line with Baron and Kenny's (1986) recommendations (Fig. 1). Predictive of the first hypothesis, a significant relationship is found between GTE and self-pluralism (path c) ( $B = .19, SE = .33, 95\% CI = .13/.25$ ) of which GTE accounts for 14% of the variance. GTE is a significant predictor of materialism (path a) ( $B = .88, SE = .10, 95\% CI = .69/1.1$ ) in line with our hypothesis. Finally, the full model (paths b, c) is estimated and displays a reduction and thus mediating effect of materialism on the GTE/self-pluralism relationship ( $B = .09, SE = .04, 95\% CI = .02/.12$ ), as predicted. The full model accounts for 26% of the variance in self-pluralism scores. Also worth noting is the decrease found between materialism and self-pluralism with the inclusion of GTE as the mediator. Although this relationship shows attenuation, it retains its original level of statistical significance before the full model is estimated. This adds weight to the

argument that materialism is a partial mediating factor between GTE and self-pluralism rather than the other way around.

(Please insert Figure 1 about here.)

Sobel's (1986) product-of-coefficients shows the indirect or mediating effect of materialism to be statistically significant (Sobel = .112,  $SE = .02$ ,  $p < .001$ ). Bootstrapping analyses are in agreement with these results ( $M = .11$ ,  $SE = .02$ ) and indicate that mediation effects significantly differed from zero (i.e., the lower-bound bootstrap effect is above zero). This advocates that materialism may have a partial mediatory effect on the GTE/self-pluralism relationship.

(Please insert Table 2 about here.)

### 3.3. Hierarchical regression analyses

A set of hierarchical regression models are estimated in order to assess the individual predictive strength of each form of technology on self-pluralism (Table 3). For the first step, age and sex are entered for control purposes. The model is significant ( $F(2, 194) = 3.97$ ,  $p < .05$ ;  $R^2 = .039$ ); however, only age is a significant predictor ( $\beta = -.193$ ,  $p < .01$ ). Model-2 involves entering each component of the GTE variable and is a significant model ( $F(4, 192) = 9.11$ ,  $p < .001$ ;  $R^2 = .22$ ). All technology variables are significant predictors, except computer use ( $\beta = -.03$ ). The strongest predictor is television viewing ( $\beta = .29$ ,  $p < .001$ ), followed by videogame use ( $\beta = .18$ ,  $p < .05$ ) and internet use ( $\beta = .18$ ,  $p < .05$ ).

The next step introduces materialism as a predictor, which weakens the relationship of each technology variable with self-pluralism. This is to be expected due to its previously

established mediatory effects. The overall model continues to be significant ( $F(1, 189) = 11.85, p < .001; R^2 = .29$ ), with materialism also being a significant predictor of self-pluralism ( $\beta = .36, p < .001$ ). Overall, the  $R^2$  for the final model (Model-3) is large (Cohen, 1992) and all variables accounted for 29% of the variance in self-pluralism scores.

(Please insert Table 3 about here.)

#### 4. Discussion

The findings clearly illustrate that when accounting for age and sex, general postmodern technology exposure and consumer orientation are good predictors of how an individual sees oneself in terms of plurality. The results show that together, age, technology use, and materialistic value orientation account for 29% of the variance in self-pluralism scores. The most interesting results show that materialism partially mediates the relationship between technology exposure and self-pluralism. These findings suggest that ‘normal’ everyday experiences can alone be sufficient indicators of one’s adherence to multiplicity.

##### 4.1. ‘Normal’ populations, age, and sex

Confirmatory findings show individuals vary according to how stable and consistent they see themselves. This contributes to the growing body of literature that documents the continuum of multiplicity and upholds the notion that this variation between individuals can be measured and accounted for. The results show agreement with Rosenberg’s (1979) and Altrocchi and McReynolds’ (1997) outcomes and demonstrate that age is negatively related to the degree individuals perceive themselves as being consistent. In line with the literature, sex is not related with self-pluralism (Lester, 2007; McReynolds et al., 2000; Rosenberg, 1979).

#### *4.2. Technology exposure, materialism, and self-pluralism*

This research specifically sought to test whether one's general everyday technology exposure, as a component of postmodern life, has any relationship with one's level of self-pluralism. Results indicate that as individuals become more involved with technology, their self-conceptualisation becomes more open to the multitude of latent selves offered via such technologies, resulting in a more fluid-like personality structure. It suggests that one possible element promoting self-pluralism is technology use as one's self-resources rapidly expand leaving the individual with a range of appreciations and understandings and thus 'possibilities for being'.

The findings of a relationship between consumerist beliefs and self-consistency substantiate an argument that fragmented consumption processes may influence multiplicity (Miles, 1998). According to these ideas, the multitude of meanings that are available to the consumer-orientated individual encourages an inherently unstable form of self. This is congruent with Dittmar et al.'s (2004) findings showing materialistic individuals to have stronger identity-related motivations.

Mediator analysis presents findings which demonstrate a relationship between technology use and materialism, as advocated by previous researchers (Bush & Gilbert, 2002; Mukerji, 1983; Sirgy et al., 1998). Accordingly, exposure to technologies may lead to stronger materialistic orientation via the consumerist values, content, themes, representations, and advertising that are intrinsic to them. In turn, the integration of stronger materialistic needs and values as a core belief system appears to be a good predictor of self-pluralism.

The findings of this paper show that pluralistic individuals certainly engage more with modern technologies and hold values congruent with postmodern society. This is a strong argument to suggest that there is a link between how individuals conceptualise their notion of

‘self’ and the coherence or instability of social phenomena surrounding them. As Rappoport and collaborators (1999) highlight, one expects to see a significant change in the understanding of ‘self’ as cultural forces emerge and evolve. It also appears that more pluralistic individuals form their identity through externally defined factors such as technology exposure and dominant belief systems, which is in agreement with the work of Lester (2007) and Butzer and Kuiper (2006) who both emphasize external influences as sources of identity construction for less integrated individuals. Thus, what is interesting is pluralistic individuals are heavily dependent on external influences which by definition are unstable and contradictory in nature. Future research should focus on this cyclical concept and examine the extent to which socially reliant individuals possess personality characteristics favourable to seeking external sources of definition (locus of control, social conformity), and whether they have a tendency to focus on unstable or more coherent sources.

Self-plurality is not necessarily an adaptive psychological modification (Donahue et al., 1993); therefore, the findings of the current study must be discussed in light of such consideration. Research in the clinical literature has tended to examine pathological sources of multiplicity (childhood stress) alongside pathological consequences (depression). This study provides the clinical domain with a fresh perspective, one which highlights the latent interconnectedness between everyday experiences which may be conducive to the development and maintenance of ‘extreme’ self-pluralism found in psychiatric conditions such as borderline personality disorder and dissociative identity disorder. Congruent with this, Suszek (2005) finds self-pluralism to be related with a lack of normal integration of thoughts, feelings, and experiences into consciousness, what is labelled as dissociation. This suggests that increased technology exposure and the mediatory effects of materialistic value orientation may be associated with depersonalisation and dissociation of selves. This offers

some explanation as to the qualitative differences evidenced in psychopathology between individuals who are highly pluralistic and those that are of a lesser degree plural. As individuals become exposed to technologies and all they convey, this may have the effect of experiencing dissociation and depersonalisation through the production of multiple independent selves. Thus, although self-pluralism is becoming acknowledged as a component of one's self-concept and an adaptive feature of post-modern society, this does not necessarily mean it is an adaptive feature of the human psyche and may still result in some variety of psychopathology. Perhaps one avenue for clinicians is disengaging 'sufferers' with postmodern immersion which can help to solidify a sense of coherence on which a clinician can build. Although, it has to be acknowledged such attempts to alter materialistic orientations are contradictory to the prevailing cultural climate and may prove difficult.

#### *4.3. Future research and limitations*

This research sought to test extant ideas of postmodern culture and changes in one's self-concept; however, it does not include all aspects of postmodern society over and above the most salient. Therefore future research can consider additional everyday experiences that may also promote materialistic beliefs or enhance exposure to conflicting views, opinion, or realities. Another avenue of investigation includes dissecting each technology variable further in order to understand what particular elements are most influential, for example, specific genres of programs or video games, uses of the Internet or types of visual media. As socialization occurs through cultural norms and parental exemplar, it may also be wise to assess parental or guardian differences of holding postmodern multiplicity values.

Methodological limitations are also apparent, particularly when using correlational statistical methods and self-report measures. Causality can never be proven via such investigation. To remedy this limitation it is recommended that future enquiries use

longitudinal cross-panel designs which can explore plausible causal hypotheses and thus substantiate a stronger argument for causality. Although we do not believe any characteristics of the sample to be different from the study population in some important way, for example, the demographics in terms of age and sex show no signs of bias, nor results from the self-pluralism questionnaire demonstrate significant deviation from a priori uses of the scale on non-online samples, selection bias may be present due to using a self-selected sample. Therefore, direct comparison of the current findings to equivalent off-line random-sample questionnaire data will substantiate the existence of any selection bias.

#### *4.4. Conclusion*

In conclusion this research provides compelling empirical evidence on how technology use, materialistic values, and the unity of the self may be interconnected. It provokes interest in the notion that differences in individuals' experiences are predictive of the variations witnessed in levels of self-pluralism. The model accounts for a large amount of the variance seen in self-pluralism and draws attention to the interactive nature of postmodern features and how they may act together to shape multiplicity. Most importantly, the current findings complement and verify frequently discussed ideas of postmodern society and the impact this has on the way an individual organises their self-concept.

## References

- Altrocchi, J., & McReynolds, P. (1997). The pluralism scale: A measure of psychological variability. In St Jeor (Ed.), *Obesity assessment: Tools, methods, interpretations. A reference case: The Reno diet heart study*. (pp. 420-424) New York: Chapman and Hall.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.
- Bauman, Z. (2000). *Liquid modernity*. Cambridge: Polity Press.
- Belk, R. W. (1988). Possessions and the extended self. *Journal of Consumer Research*, *15*, 139-168.
- Boone, G. D. (1996). *Personality multiplicity: Developmental antecedents and behavioral implications*. ProQuest Information & Learning.
- Butzer, B., & Kuiper, A. (2006). Relationships between the frequency of social comparisons and self-concept clarity, intolerance of uncertainty, anxiety, and depression. *Personality and Individual Differences*, *41*, 167-176.
- Calinescu, M. (1991). From the one to the many, pluralism in today's thought. In I. Hoesterey (Ed.), *Zeitgeist in Babel: The postmodern controversy*. Indianapolis: Indiana University Press.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155-159.
- Dittmar, H. (2005) Compulsive buying - a growing concern? An examination of gender, age, and endorsement of materialistic values as predictors. *British Journal of Psychology*, *96*, 467-491.
- Dittmar, H. Long, K., & Meek, R. (2004). Buying on the internet: gender differences in on-line and conventional buying motivations", *Sex Roles*, *50*, 423-444.

- Donahue, E. M., Robins, R. W., Roberts, B. W., & John, O. P. (1993). The divided self: Concurrent and longitudinal effects of psychological adjustment and social roles on self-concept differentiation. *Journal of Personality and Social Psychology*, *64*, 834-846.
- Erdfelder, E., Faul, F., & Buchner, A. (1996). GPOWER: A general power analysis program. *Behavior Research Methods, Instruments, & Computers*, *28*, 1-11.
- Featherstone, M. (2007). *Consumer culture and postmodernism* (2nd ed.). London: Sage.
- Gerbner, G., Cross, L., Morgan, M., & Signorielli, N. (1994). Growing up with television: The cultivation perspective. In J. Bryant & D. Zillmann (Eds.), *Media Effects: Advances in theory and research* (pp. 17-41). Hillsdale, NJ: Lawrence Erlbaum.
- Gerbner, G. (1998). Cultivation analysis: An overview. *Mass Communication and Society*, *1*, 175-194.
- Gergen, K. J. (1972). Multiple identity: The healthy, happy human being wears many masks. *Psychology Today*, *5*, 31-35, 64-66.
- Gergen, K. J. (2000a). *The saturated self: Dilemmas of identity in contemporary life*. New York: Basic books.
- Gergen, K. J. (2000b). The self in the age of information. *Washington Quarterly*, *23*, 201-214.
- James, W. (1890). *The principles of psychology, Vol. 1*, New York: Holt.
- Kingsepp, E. (2007). Fighting hyperreality with hyperreality: History and death in World War II digital games. *Games and Culture: A Journal of Interactive Media*, *2*, 366-375.
- Klein, N. (2000). *No logo*. London: Harper Collins Publishers.
- Lester, D. (1992). The disunity of the self. *Personality and Individual Differences*, *13*, 947-948.

- Lester, D. (2007). On the nature of the plural self. *Perceptual & Motor Skills, 105*, 27-28.
- Lester, D. (2010). *A multiple self theory of personality*. New York: Nova Science.
- Markus, H. R. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology, 35*, 63–78.
- Markus, H. R., & Nurius, P. (1986). Possible Selves. *American Psychologist, 41*, 954-969.
- McReynolds, P., Altrocchi, J., & House, C. (2000). Self-pluralism: assessment and relations to adjustment, life changes, and age. *Journal of Personality, 68*, 347-381.
- Mukerji, C. (1983). *From graven images: patterns of modern materialism*. New York: Columbia University Press.
- O'Guinn, T. C., & Shrum, L. J. (1997). The role of television in the construction of consumer reality. *Journal of Consumer Research, 23*, 278-294.
- Rappoport, L., Baumgardner, S., & Boone, G. (1999). Postmodern culture and the plural self. In J. Rowen, & M. Cooper (Eds.). *The plural self, multiplicity in everyday life* (pp. 93-107). London: Sage.
- Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research, 19*, 303-316.
- Richins, M. L., Mick, D. G., & Monroe, K. B. (2004). The material values scale: Measurement properties and development of a short form. *Journal of Consumer Research, 31*, 209-219.
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.
- Schmitz, K. H., Harnack, L., Jacobs Jr., D. R., Gao, S., Lytle, L. A., Coevering, P. V., & Fulton, J. E. (2004). Reliability and Validity of a Brief Questionnaire to Assess Television Viewing and Computer Use. *Journal of School Health, 74*, 370-377.

- Scrase, T. J. (2002) Television, the Middle Classes and the Transformation of Cultural Identities in West Bengal, India. *Gazette: International Journal for Communication Studies*, 64, 323.
- Shevlin, M., Miles, J. N. V., Davies, M. N. O., & Walker, S. (2000). Coefficient alpha: A useful indicator of reliability? *Personality and Individual Differences*, 28, 229-237.
- Shrum, L. J., Burroughs, J. E., & Rindfleisch, A. (2005). Television's Cultivation of Material Values. *Journal of Consumer Research*, 32, 473-479.
- Sirgy, M. J., Dong-Jin L., Kosenko, R., Meadow, H. L., Rahtz, D., Cicic, M., Guang Xi Jin, Yarsuvat, D., Blenkhorn, D. L., & Wright, N. (1998). Does television viewership play a role in the perception of quality of life? *Journal of Advertising*, 27, 125-142.
- Sobel, M. E. (1986). Some new results on indirect effects and their standard errors in covariance structure models. In N. Tuma (Ed.), *Sociological Methodology 1986* (pp. 159-186). Washington, DC: American Sociological Association.
- Suszek, H. (2005). Self-pluralism and dissociation. *Psychological Reports*, 96, 181-182.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4<sup>th</sup> ed.). New York: Harper Collins.
- Teo, T. S. H., & Lim, V. K. G. (1999). Intrinsic and extrinsic motivation in internet usage. *Omega*, 27, 25.
- Turner, J. C. (1999). Some current issues in research on social identity and self-categorization theories. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity: Context, commitment, content* (pp. 6–34). Oxford, England: Blackwell.
- Waskul, D., & Douglass, M. (1997). Cyberself: The Emergence of Self in On-Line Chat. *Information Society*, 13, 375-397.

Table 1. Pearson's correlations of all variables including a breakdown of all components making up the 'General technology exposure' variable (TV, Videogames, Internet, and Computer).

Variable (mean/SD)	1	2	3	4	5	5a	5b	5c	5d
1. Age (34.7/16.9)	1.0								
2. Sex (41% Female)	.04	1.0							
3. Self-pluralism (4.1/3.3)	-.21**	.00	1.0						
4. Material (41.9/10.94)	-.12	-.05	.50**	1.0					
5. GTE (25.8/6.7)	-.032	-.03	.39**	.53**	1.0				
5a. TV (6.6/3.1)	.17	-.10	.30**	.45**	.59**	1.0			
5b. Videogames (2.3/1.3)	-.37**	.34**	.30**	.36**	.48**	.12	1.0		
5c. Internet (13.7/3.7)	.03	.00	.24**	.34**	.79**	.16*	.17*	1.0	
5d. Computer (4.2/1.9)	-.19**	.06	.15**	.18*	.61**	.00	.42**	.40**	1.0

Note: \*  $p < .05$ , \*\*  $p < .001$ .

Table 2. Results for product-of-coefficients significance test, Bootstrapping, and Moderator analysis.

Testing indirect effect using <i>product-of-coefficients</i> approach (Sobel, 1983)						
	Value	SE	95 CI	95 CI	Z	Sig (two)
Sobel	.112	.023	.066	.157	4.795	<.001
Bootstrap results for indirect effects						
	Mean	SE	95 CI	95 CI		
Effect	.111	.023	.068	.159		
Results for moderator variable GTE x Materialism						
	B	SE	95 CI	95 CI	$\beta$	Sig (two)
Moderator	.092	.140	-.185	.369	.041	.651

Note: Bootstrap samples = 25,000, Z = critical value

Table 3. Summary of hierarchical multiple regression for age, individual technology variables, and materialism predicting self-pluralism.

		B	(CI – B)	SE	$\beta$
Model-1	(Constant)	5.7	(4.09/7.4)	.86	
	Sex	.13	(-.81/1.1)	.47	.02
	Age	-.04	(-.07/ -.01)	.01	-.196**
Model-2	(Constant)	-.34	(-2.2/2.9)	1.3	
	Sex	-.08	(-1.0/.87)	.48	-.01
	Age	-.04	(-.06/-.01)	.01	-.19**
	<b>TV</b>	<b>.31</b>	<b>(.17/.45)</b>	<b>.08</b>	<b>.29***</b>
	<b>Videogame</b>	<b>.44</b>	<b>(.04/.86)</b>	<b>.19</b>	<b>.18*</b>
	<b>Internet</b>	<b>.16</b>	<b>(.04/.29)</b>	<b>.06</b>	<b>.18*</b>
	<b>Computer</b>	<b>-.07</b>	<b>(-.33/.19)</b>	<b>.13</b>	<b>-.04</b>
Model-3	(Constant)	-1.9	(-4.1/.25)	1.1	
	Sex	.20	(-.70/1.1)	.46	.03
	Age	-.03	(-.06/-.00)	.01	-.15*
	TV	.16	(.015/.31)	.08	.15*
	Videogame	.21	(-.15/.57)	.19	.09
	Internet	.08	(-.04/.20)	.06	.09
	Computer	-.03	(-.27/.22)	.13	-.02
	<b>Materialism</b>	<b>.11</b>	<b>(.063/.15)</b>	<b>.02</b>	<b>.36***</b>

Note:  $R^2 = .039$  for Model-1,  $\Delta R^2 = .18$  for Model-2 ( $p < .001$ ),  $\Delta R^2 = .08$  for Model-3 ( $p < .001$ ). Additional variables for each model are in bold, \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , CI-B = Confidence Intervals (95%) for B.

Figure 1. Mediator regression for materialism mediating the relationship between general technology exposure and self-pluralism, including standardised beta-weights,  $F$ -values, and  $R^2$ 's for the model before (reduced model, path c) and after (full model, paths c and b) the inclusion of materialism. The change in regression coefficient for paths c and b are in parentheses. Prior to testing for mediation, age and sex are entered into the regression model hierarchically; this meant all regression coefficients presented below are adjusted for age and sex effects.

\*  $p < .05$ , \*\*\*  $p < .001$

