



The Impact of Advanced Capitalism on Well-being: an Evidence-Informed Model

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Abstract

Advanced capitalism (AC) is a macro-economic and macro-cultural system that exerts profound influence on individual well-being. AC has led to great prosperity since the Second World War and has been of substantial benefit to well-being, providing levels of personal and political freedom, as well as infrastructure, health, and social provisions unheard of throughout most of human history. Nevertheless, growing levels of inequality within AC countries alongside recent economic stagnation and constraints have resulted in diminished opportunities and increasing insecurity for many citizens. This paper presents an integrative, evidence-informed model of the impact of AC on well-being. It considers the evidence in relation to this model and the hypothesis that AC can have detrimental consequences for well-being. The model identifies two distinct macro-cultural domains that interact to influence adjustment. The first domain involves marked increases in family instability and employment insecurity that characterize AC societies, creating *AC-specific stressors* in these areas. The second domain involves *AC-specific socialization processes* that promote success, status, and self-image, alongside the need to develop a market-driven identity. The model finds broad support for AC-specific stressors and variable support across AC-specific socialization processes. While there is evidence to inform each of the respective domains, interactions between domains have rarely been investigated. To address vulnerabilities that AC creates for well-being, recommendations are made to benefit adjustment including enhancing personal agency, increasing the stability of interpersonal bonds, and addressing social inequalities.

Keywords Advanced capitalism · Well-being · Culture · Evidence-informed model

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The development of culturally sensitive models of psychological adjustment is an enduring and crucial theme in psychology (e.g., Greenfield 2009; Ratner 2012). It is surprising therefore, that relatively little attention has been paid to the impact of capitalism as an overarching cultural reality in the lives of Western individuals (for exceptions see Kasser et al. 2007; Ratner 2012; Seligman 1990). In this paper, I propose an evidence-informed model of the impact of advanced capitalism (AC) on well-being and consider the degree to which the empirical data support this model and the hypothesis that AC can have detrimental consequences for well-being.

Capitalism is an economic system based on private ownership of the means of production and their operation for profit (Zimbalist and Sherman 2014). AC describes societies where the capitalist model has been developed deeply and extensively over a prolonged period of time. The research reviewed here involves advanced capitalist countries from both liberal-market economies (LME; e.g., the USA, the UK) and more coordinated market economies (CME; e.g., Germany, Denmark), a seminal distinction made by Hall and Soskice in their Varieties of Capitalism model (Hall and Soskice 2001). Adopting a broad definition of AC is congruent with the range of cross-national research to be reviewed and the limited empirical research studying the impact of capitalism on mental health and well-being. Differences between countries or characteristics of market economies will be highlighted where relevant. In practice, the varieties of capitalism model remains confined to Western countries and the vast majority of research reviewed here is of Western origin.

Capitalism is also a social system which exerts broad and significant influences on how social relationships are organized and experienced (Streeck 2016). From a psychological perspective, the culture of AC can be conceptualized as a higher-order social-contextual factor that influences lower-order factors such as the individual and family through cultural beliefs and values, traditions and practices, and laws (Bronfenbrenner 1979). These macro-cultural influences cascade down, effecting transactions between the person and their environment over time. Bronfenbrenner (1979) designated the macro-cultural system as an overarching pattern of ideology and organization of interconnected social systems that are common to a given society. The macro-cultural level forms a generalized pattern that provides the context for, and shapes the substance of, the subsystems nested within it, such as the individual, the family, workplaces, and the community.

In AC societies, the overarching pattern of ideology is a set of values based in self-interest and interpersonal styles rooted in competition, a strong desire for financial success, high levels of consumption, and belief in the necessity of economic growth (Kasser et al. 2007). In the proposed model of AC and well-being, this macro-cultural context has become associated with shifts toward greater degrees of materialism and individualism, accompanied by increased instability of interpersonal bonds (e.g., Greenfield 2009; Seligman 1990) and precariousness of employment (Kalleberg 2009). Although the influences of AC on well-being are enveloping, they are also bi-directional rather than deterministic or causal. I conceptualize the distinct macro-cultural characteristics of AC as enduring cultural risk factors that may increase the probability of poorer well-being, depending on their interaction with other risk and protective factors in the individual's ecology. Broadly speaking, it is likely that macro-cultural and individual processes exist in a dynamic, transactional relationship and are constitutive of each other, rather than the former casually influencing the latter in a linear, top-down manner (Heft 2013).

The Impact of AC on Individual Well-being: an Integrative Model

The model of how AC influences individual well-being identifies two interacting domains. The first domain describes *AC-specific stressors* that arise from the instability and insecurity that often characterizes intimacy, family life, and employment. These stressors frequently occur in the absence or limited presence of supportive extended family and community structures, exacerbating their adverse consequences. AC specific-stressors may be cumulative (e.g., frequent family transitions) and/or interactive (e.g., partner/family instability and employment insecurity occurring contemporaneously), increasing the probability and in some cases the severity of maladjustment.

The psychological security and stability that family life and employment have traditionally provided in AC societies has lessened considerably over the past 50 to 60 years. Alongside these developments, the values and practices of consumer culture, namely *AC-specific socialization* processes, have progressively governed socialization. The individualistic and materialistic orientations of AC cultures are believed to contribute to people's difficulties forming stable bonds in these societies (Kasser et al. 2007; Konrath et al. 2014), thereby contributing to high levels of divorce and increasing rates of cohabitation (e.g., Cherlin 2005; Lesthaeghe 2014). In their cross-generational analyses of American twelfth graders between 1976 and 2007 ($N = 355, 296$), youth materialism showed significant relationships with indices of social instability and disconnection (e.g., divorce, unemployment) both contemporaneously and across time (Twenge and Kasser 2013).

There is limited research investigating the mechanisms by which AC-specific stressors in the domains of intimacy, family life, and employment contribute to poorer well-being. However, there are indications that they help to destabilize the formation of secure, close, and trusting relationships, and thereby undermine well-being. Robust data within and across AC nations show reduced levels of interpersonal trust and social cohesion in countries with the highest levels of inequality (Mikucka, Sarracino, & Dubrow, 2017; Oishi et al. 2011; see Buttrick et al. 2017 for review of the inequality literature). The increasing instability of interpersonal bonds in AC is also illustrated by a recent meta-analysis examining changes in self-reported attachment style from 1988 to 2011 in samples of young adults in the USA (Konrath et al. 2014). Konrath et al. (2014) found significant decreases in *secure* attachment styles accompanied by increases in *insecure* attachment styles, controlling for age, gender, race, and publication status. They also found particularly consistent support for increases in *dismissing* attachment styles, which they suggest may be associated with cultural factors such as increased narcissism and individualism, as well as declining empathy or concern for others (Konrath et al. 2011).

The second domain in the model is encapsulated by the term AC-specific socialization processes, namely the individual's involvement in consumer culture with its attendant individualistic and materialistic values, which emphasize extrinsic goals such as success, status, having rather than being, and self-image. Concomitant with the cultural promotion of individualistic and materialistic values, individuals are obliged to develop an identity that is market-driven and embedded in a narrative of success, status, and an enhanced self-image. In the USA, there is evidence of increased materialism and goals related to the pursuit of money, fame, and an enhanced self-image over recent decades among large representative samples of high school and college students (Twenge et al. 2010a; Twenge et al. 2012). Increases in individualistic and materialistic values have also been documented over longer historical time-frames in the USA and the UK (Greenfield 2013), with a recent meta-analysis

supporting relationships between materialism and poorer emotional well-being and life satisfaction (Dittmar et al. 2014). Furthermore, substantial cross-national data comparing individualistic vs. collectivistic nations suggest higher levels of mental health problems in areas such as depression (Chiao and Blizinsky 2010; Kessler and Ustun 2008; Way and Lieberman 2010), suicide (Eckersley and Dear 2002; Webster Rudmin et al. 2003), and youth aggression (Bergeron and Schneider 2005; Bergmüller 2013) in nations characterized by more individualistic values. Several authors propose that generational increases in mental health problems over the last 50 years (Kessler and Wang 2008; Sweeting et al. 2010; Twenge et al. 2010b) are partly related to cultural shifts toward individualism and materialism (Eckersley and Dear 2002; Schwartz 2000; Seligman 1990; Twenge et al. 2010a, b).

There are two primary mechanisms by which AC-specific socialization processes are believed to influence well-being. The first is through exposure to advertising, which helps to create feelings of insecurity and unhappiness in individuals by increasing their awareness of discrepancies between their present state and the ideals defined by AC market-driven cultures (Gulas and McKeage 2000; Richins 1995). By engaging in upward social comparisons, individuals find themselves lacking in relation to unrealistic images and ideals, leading to self-doubt, insecurities, and identity deficits thereby contributing to poorer well-being (Dittmar 2007). The effects of advertising on children and adolescents include increases in materialistic values with consequent poorer well-being (Opree et al. 2012). Meta-analysis of the impact of media exposure to the thin ideal on body dissatisfaction in adolescent and adult females (Groesz et al. 2002; Grabe et al. 2008; Ferguson 2013) and longitudinal studies on children's food preferences, diet, and health behaviors (Hastings et al. 2003; Livingstone and Helsper 2004) all reveal significant but small to moderate effect sizes. These social comparison processes are also operative via social media on sites such as Facebook and MySpace (de Vries and Kühne 2015; Lee 2014), where they incorporate the same market ideals around attractiveness, success, and enhanced self-image (Manago et al. 2008). For some individuals, engaging in social comparison may increase the likelihood of negative rather than positive effects of social media use (de Vries and Kühne 2015; Manago et al. 2008).

A second mechanism by which AC-specific socialization processes promoting individualism and materialism influence well-being is through traditional socialization agents such parents and peers (Twenge and Kasser 2013). Young people report higher levels of materialism when their parents (Goldberg et al. 2003; Kasser et al. 1995) and peers (Sheldon et al. 2000) are materialistic. They have also been shown to respond to peer pressure to become more materialistic (Banerjee and Dittmar 2008) and compare themselves unfavorably to peers who have valued possessions relating to social acceptance and status (Roper and Shah 2007). Finally, AC-specific socialization processes of materialism have significant associations with AC-specific stressors of family instability and insecurity (e.g., divorce) (Rindfleisch et al. 1997; Roberts et al. 2003; Twenge and Kasser 2013).

The AC model proposes that transactions between family instability or job insecurity and individualistic and materialistic values and practices are bi-directional and can form a vicious cycle. For instance, the predominance of extrinsically oriented values may help undermine the development of stable relationships and contribute to fragmentation in the spheres of intimacy and family life, while exacerbating the need of individuals to rely on themselves in a competitive marketplace. Conversely, repeated experiences of instability and insecurity of interpersonal bonds may increase the probability that individuals over-invest in materialistic and individualistic pursuits and values to cope with growing mistrust and emotional dislocation and/or to re-invest in reward-based and cultural-sanctioned goals that are more within their control.

Relationships between job insecurity and AC-specific socialization processes are less certain and are lacking in empirical research. At a broad level, the potential threat of losing one's job threatens not only continued employment and the ability to make a living but also the satisfaction of fundamental psychological and social needs. There is some indication that job insecurity thwarts needs for competence, autonomy and relatedness, and hence the realization of intrinsically oriented goals (De Witte et al. 2015). Moreover, given the centrality of employment to relative income position and social status, job insecurity is likely to have adverse consequences for people's social status and self-image and hence extrinsically oriented goals that comprise AC-specific socialization. In sum, the AC-specific stressor of job insecurity is likely to promote poorer well-being by: (1) destabilizing AC-specific socialization processes that enhance the individual's social standing and self-image; and (2) creating uncertainty and insecurity around needs for competence, autonomy, and work-related social relationships that are protective against the negative effects of AC-specific socialization processes.

The model of the impact of AC on well-being provides a heuristic framework that identifies macro-cultural factors that may pose a risk to well-being, and which may help explain variation in outcomes (see Fig. 1). This mediational model suggests that AC societies are associated with vulnerabilities to specific social stressors (family instability, job insecurity) and socialization processes (individualism, materialism) that are, in turn, associated with lower well-being. The literature is limited by the absence of experimental studies comparing individuals from AC and non-AC countries to establish causal links between AC cultures and predictors such as family instability or job insecurity. Nonetheless, there is substantive theoretical and empirical data, and hence converging evidence, that substantiate these predictors as characteristics of AC societies.

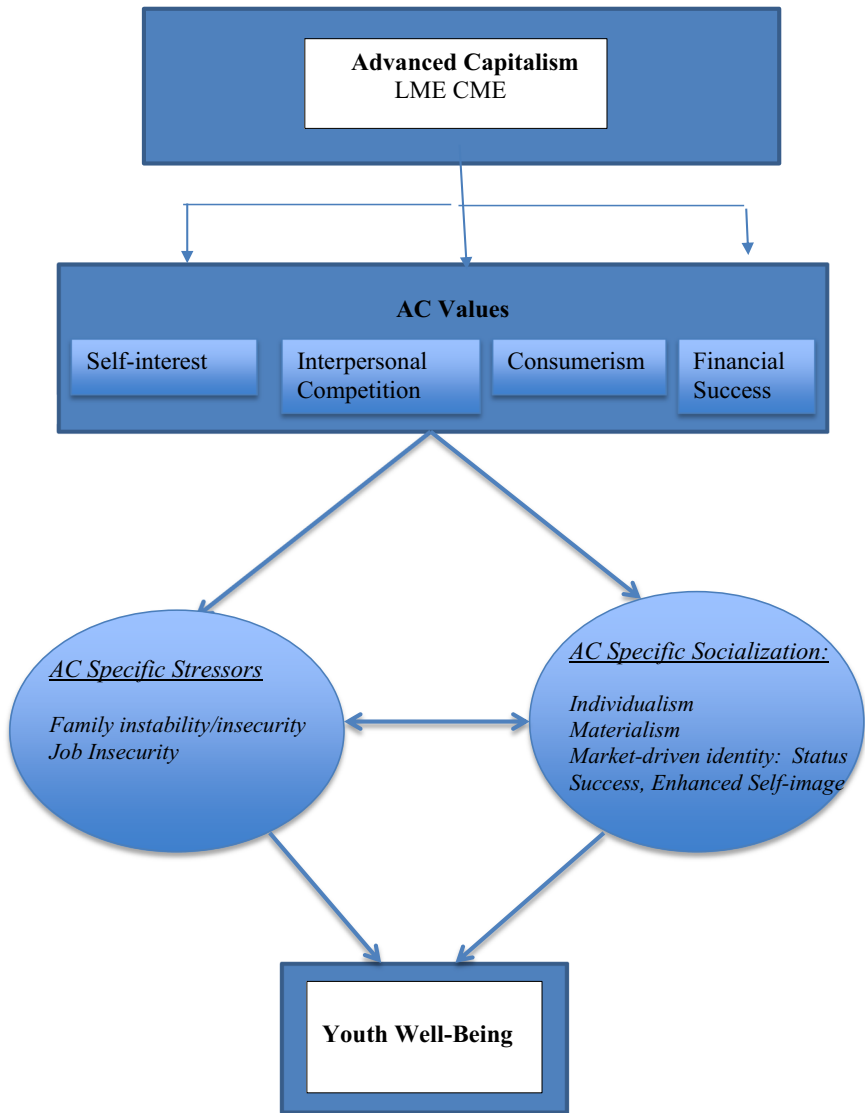
Finally, it is important to recognize that AC societies have brought levels of prosperity, personal freedoms, and advances in infrastructure and social provisions previously unheard of in human history (Ridley 2010). These developments are demonstrably associated with positive outcomes for well-being (Diener et al. 2010; Weimann et al. 2015). However, the evidence-informed model of AC and well-being suggests that AC societies are also challenging and stressful for many individuals and in specific ways that merit further study.

The following sections review the evidence documenting marked structural and psychological changes in relationships and families in AC cultures and the impact of these macro-cultural changes on the well-being of children and adults. Literature on the impact of job insecurity on well-being is then examined. Subsequently, evidence is considered suggesting that AC-specific socialization processes involving individualism and materialism promote a market-driven identity and may be related to poorer well-being. In reviewing studies, I adhere to the hierarchy of research evidence that privileges meta-analyses as well as longitudinal investigations, while considering studies of well-being at different points across the life-span.

AC-Specific Stressors: Family Instability and Child Adjustment

AC and Family Instability

Patterns of relationship formation and dissolution have been changing profoundly across AC societies (Cherlin 2005; Perelli-Harris and Lyons-Amos 2015). The increased familial instability at the heart of many AC countries is illustrated by delayed age of first marriage and



Note: LME=liberal market economies; CME=coordinated market economies

Fig. 1 Evidence-informed model: influence of advanced capitalism on well-being

declining marriage rates, rising divorce rates, and increasing rates of cohabitation and non-marital child-bearing (Lesthaeghe 2014 for overview of the Second Demographic Transition; Cherlin 2016; Perelli-Harris and Lyons-Amos 2016 for empirical syntheses). A divorce rate of about 50% in the USA, combined with an increase in unmarried births, means that more children are raised by single parents, and about 50% of unmarried first-time mothers are adolescents (Cherlin 2005). Moreover, 40% of children born in the USA in 2007 were born to unwed parents and started life in “fragile” families, more than twice the rate in 1980 (18%) and

an eightfold increase from 1960 (5%) (Waldfoegel et al. 2010). About 40% of all US children spend time in a cohabiting family, and the greater instability of families begun by cohabitation means that children are more likely to experience family disruption (Bumpass and Lu 2000; Raley and Bumpass 2003).

In the UK, nearly 50% of children see their parents separated by their 15th birthday, and over 24% of all children live in single-parent families (Centre for Social Justice 2013). Over the last 40 years the proportion of the adult population that is married has declined from about 70% to less than half, while the percentage of lone parents has almost doubled (Murphy 2011). The rise in cohabitation is the cultural trend that has changed most significantly, increasing from fewer than 1 in 100 adults under the age of 50 in the 1960s to 1 in 6 today (Beaujouan and Bhrolcháin 2011). Similar demographic changes including delayed marriage, increasing rates of divorce and cohabitation have been documented across Europe and in Canada, Australia, and New Zealand (Kiernan 2004; Perelli-Harris and Lyons-Amos 2015; Ramsøy 1994).

The net result of these significant demographic changes in AC societies is an increased likelihood that many families will undergo repeated structural changes. The patterns of family formation, however, are far from uniform within AC countries. Family instability seems to be greater in more disadvantaged segments of the population and bears particular associations with levels of education. In the USA, a longitudinal study of young adults who had reached their late 40s (Aughinbaugh et al. 2013) and an examination of marital dissolution rates from the mid-1970s to the 1990s (Martin 2004), both show large educational gaps in divorce. Specifically, there have been declining rates of divorce among the better educated (e.g., 4-year college degree or more), but continuing high rates of divorce among the less educated (less than a 4-year college degree). Furthermore, significant variation in the relationship between education levels and risk of divorce was found across 16 European countries and the USA (Harkonen and Dronkers 2006). Harkonen and Dronkers (2006) did not find a relationship between education and divorce in several European countries characterized by CME economies (e.g., West Germany, Sweden, Switzerland, Norway), found a negative relation between education and divorce in Austria, Lithuania, and the USA, and a positive relationship in countries such as France, Italy, and Spain. Across countries, the de-institutionalization of marriage and unconventional family practices were associated with a negative educational divorce gradient, while welfare state expenditure was associated with a more positive educational divorce gradient.

Considerable evidence suggests that lower education is also associated with greater non-marital childbearing in the USA, whether the births occur to single mothers or to cohabiting couples (Rindfuss et al. 1996; Upchurch et al. 2002; Ventura 2009). Given that low levels of education in the USA are often associated with higher levels of socio-economic disadvantage, it has been argued that non-marital childbearing reproduces class and racial disparities in social and economic outcomes (i.e., *diverging destinies*) through its association with partnership instability and multi-partnered fertility (McLanahan 2004; McLanahan and Jacobsen 2015). Across Europe, Perelli-Harris et al. (2010) similarly find that cohabiting women with low levels of education have a significantly greater risk of early first births than women with medium education, while cohabiting women with high levels of education have a significantly lower risk. They conclude that, although economic developments in many AC countries have provided higher standards of living and opportunities for increased consumption, the least educated and skilled have struggled to adapt given reduced job security. As a consequence, young adults have adopted prolonged education as a principal strategy to manage this new AC environment due to its crucial importance for employment stability and economic success (Perelli-Harris et al. 2010) and parental investment in children and families (Lundberg and Pollak 2013).

A complementary hypothesis is that marriage has become *market-driven* and aligned with extrinsic values, a status symbol confined to the privileged, characterized by economically attractive people marrying each other (Cherlin 2016). For the less privileged, rising income inequality and limited public funding for education in some AC economies has prevented low-educated couples from achieving the standard of living necessary for establishing value on the marriage market (McLanahan and Percheski 2008). Young men in AC countries who are from the lower classes and who are less educated are more likely to experience employment insecurity, to delay partnerships and parenthood, and to substitute cohabiting relationships for marriage (Mills and Blossfeld 2013). For those with greater privilege, the gender-egalitarian equilibrium of committed, domestic and work-sharing couples in long-term relationships has evolved as a specific adaptation to economic and social circumstances in AC. Lower levels of inequality and the more gender-egalitarian roles and generous social welfare regimes of CME provide better support for this adaptation (Esping-Andersen and Billari 2015; Goldscheider et al. 2015). The notion of *market-driven marriage* accords with a study involving 25 European countries where the education-marriage gradient was intensified by country level inequality and driven partly by social comparisons to establish perceived market value (Kalmijn 2013).

The Impact of Family Instability on Well-being

The growing family instability seen in AC countries has been repeatedly related to adverse outcomes for children. In a longitudinal study examining relationships between family instability and child adjustment from kindergarten to fifth grade using growth curve models (Milan, Pinderhughes, and Conduct Problems Prevention Research Group 2006), family instability trajectories predicted children's externalizing and internalizing behavior over this period. High levels of family instability also incrementally predicted the likelihood of meeting criteria for a DSM-IV diagnosis during elementary school, above and beyond prediction from earlier measures of maladjustment. Reporting on their 6-year longitudinal study of the association between maternal relationship instability and children's emotional and behavioral functioning during middle childhood in a representative sample of low income families, Bachman et al. (2011) found that a greater total number of maternal transitions predicted both emotional and behavioral problems, with transitions in the previous 2 years having particular impact. Recent entrances into cohabiting partnerships were problematic for children, increasing a range of internalizing and externalizing symptoms, perhaps underscoring the stressful nature of cohabiting transitions. There were no indications that possible "third" variables accounted for relationships between family instability and child adjustment. In a pioneering longitudinal study of 206 lower and working-class children from grade 4 experiencing multiple family transitions (Capaldi and Patterson 1991), linear relationships were found between the number of family transitions and poorer youth adjustment, after controlling for family income and socio-economic status. Number of transitions was highly related to maternal antisocial behavior and unskilled parenting practices, which in turn placed the child at risk of poor adjustment. Fomby and Cherlin (2007) found that the number of family transitions was partly causal in explaining behavioral problems and delinquency using a nationally representative two-generation longitudinal survey, but only for white and not for black children.

Waldfoegel and colleagues summarized numerous reports from the Fragile Families and Child Wellbeing Study (FFCWS), a longitudinal data set that follows a cohort of approximately 5000 children born between 1998 and 2000 in medium to large US cities (Waldfoegel et al. 2010),

containing 3700 children born to married mothers and 1300 born to unmarried mothers. Parents were interviewed at the time of the child's birth and approximately 1, 3, and 5 years later and evaluated on a range of cognitive, behavioral, and health outcomes. The FFCWS studies demonstrate that children who live with single or cohabiting parents fare worse as adolescents and young adults in their educational outcomes, risk of teen birth, attachment to school, and future employment than do children who grow up in married-couple families. Generally speaking, relationships are less stable and more complex in families formed by cohabiting parents: they are more likely to include children from other partnerships, are characterized by more fragile parental relationships, are likely to dissolve by the time their children are 3 years old, and are marked by higher rates of poverty, unemployment, and poorer quality parenting (McLanahan 2004). It may also be that early and/or cumulative family instability alters the template upon which children develop later social relationships and competencies.

Finally, preliminary evidence identifies the importance of gene-environment interactions when attempting to understand family instability in AC. Waldman (2007) studied gene-environment interactions between dopamine receptor D2 gene (DRD2) and putative family environmental risk factors that reflected mothers' marital stability in children diagnosed with attention-deficit/hyperactivity disorder (ADHD). Three measures of marital stability, namely age at first marriage, number of marriages or cohabiting relationships, and marital status were associated with either the child's or mother's dopamine receptor genotypes. Moreover, there were gene-environment interactions between children's genotypes and marital stability, and ADHD diagnoses.

AC-Specific Stressors: Job Insecurity and Well-being

AC and Job Insecurity

Alongside the profound transformation of family life in AC countries, enormous changes in rapidly evolving labor markets have occurred over the last three decades (Ferrie 2001). The predominant shifts have been toward increased job insecurity associated with globalization and increasing competition (D'Souza et al. 2003) resulting in plant closures with mass redundancies; outsourcing, downsizing, and mergers to adapt to the new economic situation, which often involve layoffs or the threat of layoffs (Gowing et al. 1998); and the increased use of flexible employment contracts involving subcontracted and non-permanent employees (Erlinghagen 2008; Guest 2004). Job insecurity has become a significant social phenomenon caused by fundamental changes in the economic system of AC countries, and has led to substantial psychological research regarding its prevalence, causes, and consequences for individual physical and mental health and well-being (De Witte 2005).

Job insecurity or the "threat of unemployment" is defined by a perceived threat of job loss and associated insecurities and anxieties (Sverke et al. 2006). Based on findings from the European Social Survey, carried out in 2004 and 2005 in 17 European countries, Erlinghagen 351 (2008) reports that 14% of respondents did not agree with the item "My job is secure," while based on the International Social Survey Program collected in 15 OECD countries, Anderson and Pontusson (2007) reported that about 20–25% of the respondents responded positively to the affective item "Do you worry about the possibilities of losing your job?," with very significant variation across countries (e.g., 11% in Norway, 54% in Spain). Consistent with European data, long-term employment in the USA has become rare with increasing job

opportunities being temporary or contract-based (Sparks et al. 2001). In the UK a survey of more than 3000 workers as part of the Skills and Employment Survey (1986–2012) documents that British workers are feeling less secure and more pressured at work than at any time in the past 20 years, and that this increase in job insecurity is found among all types of employees (Gallie et al. 2016). By contrast, Gregg and Gardner (2015) argue that there is little support for the notion that job insecurity has increased across the UK workforce over the past two decades, but they do suggest that a growing minority is particularly at risk (e.g., young people). Overall, these studies suggest that job insecurity affects a small but significant part of the employed European and US population and relatively large numbers of people in absolute figures.

Impact of Job Insecurity on Well-being

Two meta-analyses of available studies in English have found that job insecurity is associated specifically with job dissatisfaction and more broadly with indicators of physical and mental health (Cheng and Chan 2008; Sverke et al. 2002), with the most recent meta-analyses including 133 studies from 1980 to 2006. These studies suggest a gradient in the relationships between job insecurity and the diverse outcomes studied, with stronger links to reduced job satisfaction and substantial but more limited impacts on aspects of well-being and health outside the workplace, with the weakest links to physical health (De Witte et al. 2015). Longitudinal studies suggest that the causal direction is from job insecurity toward lowered psychological well-being and somatic health (Ferrie et al. 2002; Kalil et al. 2009; Virtanen et al. 2010), and that job insecurity is more problematic for psychological adjustment than the certainty of becoming unemployed (Dekker and Schaufeli 1995). In the Whitehall study, involving a large longitudinal sample of UK civil servants studied across 14 years, robust evidence linked anticipated job loss with self-reported physical health and minor psychiatric morbidity as rated by the General Health Questionnaire (Ferrie et al. 1995), with exposure to chronic job insecurity showing the strongest relationships with these outcomes (Ferrie et al. 2002). Similarly, in their longitudinal study of job insecurity over periods of about 3 years to almost a decade in two large representative samples of American workers, Burgard et al. (2009) found that persistent job insecurity was an important predictor of self-rated health, and in one sample, depressive symptoms. These results were found after controlling for sociodemographic and job characteristics, earlier health and mental health behaviors, and negative reporting style. De Cuyper et al. (2012) established reciprocal cross-lagged relationships between job insecurity and emotional exhaustion, with similar reciprocal relationships found between job insecurity and lowered self-esteem over time (Kinnunen et al. 2003). These longitudinal data suggest that negative interactions can consolidate over time, strengthening the negative consequences of perceived job insecurity (De Witte et al. 2015).

In summary, the empirical evidence suggests that in many AC countries the growing instability of adult intimate relationships and family life, as well as insecurity associated with employment, can have negative consequences for well-being. There are indications that education is a protective factor, providing individuals with social capital and interpersonal skills that promote family stability and help them succeed in a competitive, technologically sophisticated world. Unfortunately, no research has investigated the contemporaneous impact of instability and/or insecurity in intimate relationships and employment on the well-being of adults. The AC hypotheses would be that contemporaneous destabilization in both of these key life domains would increase the probability and for some individuals the severity of maladjustment. Preliminary studies documenting the adverse consequences of job insecurity for

marriages and family life (Larson et al. 1994) and longitudinal data showing the deleterious impact of work-family conflict on mental health (Hanson et al. 2014; Leineweber et al. 2013) suggest this hypothesis warrants future research.

AC-Specific Socialization: Individualism and Well-being

The individualistic orientation at the heart of AC has been studied in research on relationships between individualistic vs. collectivistic cultural values and mental health and well-being. Cultural psychologists define individualistic cultures as those which encourage a conceptualization of people as independent of each other and emphasize self-expression and the pursuit of individuality over group goals, whereas collectivistic cultures characterize people as highly interconnected to one another and favor the maintenance of social harmony over the assertion of individuality (Hofstede et al. 2010; Triandis and Suh 2002). Relationships between individualistic and/or collectivist value orientations and mental health and well-being in AC are illustrated by examining cross-national studies looking at depression, suicide, and aggression in young people. These studies use country rankings of value preferences on the individualism vs. collectivism dimension, based on evidence that when personal values are aggregated to the societal level they predict various behavior-related variables such as suicide rates, educational achievement, and female-to-male income ratios (Hofstede et al. 2010).

In the field of cultural neuroscience, Chiao and Blizinsky (2010) found that a genetic risk of depression (carrying the short (S) allele of the 5-HTTLPR) was less likely to be realized in collectivistic compared with individualistic cultures based on a sample of 29 nations (covering Western and Eastern Europe, South Africa, South and East Asia, and South America). Furthermore, the prevalence of depression was significantly lower in collectivistic than in individualistic nations despite much higher proportions of the population carrying short (S) alleles of the 5-HTTLPR in collectivistic countries. In their review of studies examining genetic variation, cultural processes, and mental health outcomes, Way and Lieberman (2010) conclude that there is a relationship between the allele related to social sensitivity and lifetime prevalence rates of depression across nations, where reduced rates of depression in populations with a high proportion of social sensitivity alleles is due to greater collectivism. Finally, higher rates of depression have been found in Western as opposed to Asian countries (Kessler and Ustun 2008), and individuals of East Asian (Chang and Arkin 2002), Chinese (Hwang and Myers 2007), and Latino (Breslau and Chang 2006) descent all experience lower rates of depression in their home societies than members of these cultures when born in the USA. These studies suggest cultural factors associated with greater familial and communal support may help account for these differences.

Cross-national research shows positive associations between individualism and suicide mortality (Eckersley and Dear 2002; Webster Rudmin et al. 2003). Webster Rudmin et al. (2003) examined cultural values as predictors of suicide incidence rates across a broad age-range and inclusive of gender for 33 nations. Individualism was a strong positive correlate of suicide and predicted a greater preponderance of male suicides for all age groups, consistent with previous research. Individualism was negatively correlated with suicide for young women, suggesting that young women in individualistic societies may experience less hopelessness and a greater sense of capability than young women in collectivistic societies. Studies of suicide at the individual level support aggregate data. Research on samples of French, Turkish, and Australian adolescents and young adults find that higher levels of individualism are associated

with or predict suicidal ideation and behavior (Eskin 2013; van Leeuwen et al. 2010), with greater support seeking in young people higher in collectivist values (Scott et al. 2004).

Turning to aggressive behavior in young people, Bergeron and Schneider's (2005) quantitative review of 185 comparisons between pairs of individualistic vs. collectivistic cultures, involving 42,517 participants aged from 4 to 18 years of age, strongly supported their hypothesis that children in collectivistic cultures would show less aggressive behavior than children from individualistic cultures. Bergmüller (2013) examined the relationship between dominant cultural values and school principals' perceptions of grades 4 and 8 verbally and physically aggressive student behavior in representative samples (total $N = 428,566$) from 62 countries involved in the Trends in International Science and Mathematics Study (TISS). Cultural individualism was significantly related to physically and verbally aggressive student behavior, even after controlling for school- and country-level variables previously found to predict student aggression, such as size of the school and community, and proportion of students from disadvantaged homes. Finally, a national context of individualism was associated with violence as rated by school principals ($N = 990$) from nationally representative samples of schools in 15 countries including diverse European and three non-European nations (Menzer and Torney-Purta 2012).

This brief review suggests that cultures characterized by individualistic compared with collectivistic value orientations show greater childhood aggression and a greater preponderance of depression and male suicide. Individualistic-oriented AC societies may be protective for some women, fostering greater opportunities and contributing to comparatively lower rates of suicide, as well as reducing their exposure to forms of aggression such as partner violence (Archer 2006).

AC-Specific Socialization: Materialism and Well-being

Materialism may be defined as individual differences in people's long-term endorsement of values, goals, and associated beliefs centered on the importance of acquiring money and possessions to convey status (Kasser and Kanner 2004). Although materialistic people tend to view the possession of goods as a way to achieve personal happiness (Ahuvia and Wong 2002; Fournier and Richins 1991), individuals endorsing high levels of materialistic values tend to report feelings of insecurity and low self-esteem, and value the pursuit of extrinsic goals related to enhancing one's image, status, and wealth (Kasser and Ryan 1993; Deci and Ryan 2000). They also show lower levels of empathy (Sheldon and Kasser 1995), decreased value attached to interpersonal relationships (Bauer et al. 2012) and family values (Burroughs and Rindfleisch 2002), and higher levels of work-family conflict (Promislo et al. 2010).

In families, materialism is more likely to be present when parents have divorced or separated (Rindfleisch et al. 1997; Roberts et al. 2003), where possessions are stressed as a route to happiness (Roberts et al. 2003), and where mothers are characterized as less nurturing (Kasser et al. 1995) and less involved (Flouri 2004). Emotional rather than financial resources seems to mediate the link between family disruption and materialism (Rindfleisch et al. 1997), consistent with recent findings across diverse country contexts including the USA, Western Europe, and South America (Baker et al. 2013). These studies suggest that increased materialism in young people is associated with perturbations in the stability and quality of parent-child relationships, where possessions and materialistic strivings are deployed to manage negative emotional states and stressful family circumstances. Conversely, support and acceptance for children aged 12 to 18 years of age by parents and peers contributed to healthy self-esteem, which reduced the need to compensate through material goods (Chaplin and John 2010).

Dittmar et al.'s (2014) recent meta-analysis examined the relationship between materialism and well-being in cross-sectional research based on 753 effect sizes from 258 samples. The meta-analysis strongly supported the notion that individuals high in materialistic values display poorer well-being. Nevertheless, the reviewed studies showed significant limitations. Data were largely correlational and questionnaire-based for both measures of materialism and well-being, which may have inflated relationships between independent and dependent measures. In support of this hypothesis, relationships between high materialism and lower personal well-being were reduced when materialism was assessed via semi-structured interview rather than questionnaire. Moreover, samples were very restricted, with the majority (60%) being school/university samples of predominantly white young adults. Few samples included children, socially disadvantaged adults or families, diverse ethnicities, or clinical participants. Thus, we do not know how materialism functions in relation to the broader array of familial and social risk factors that are commonly associated with poorer well-being and psychological disorder. Pertinent to the AC model, we do not know whether materialism may moderate the relationship between significant instability and insecurity in family life and/or employment and poorer well-being.

Kasser et al. (Kasser et al. 2014) addressed some of the limitations in cross-sectional materialism research by examining how changes in materialistic aspirations related to changes in well-being longitudinally via follow-up at 6 months, 2 years, and 12 years. These longitudinal studies consistently demonstrate that decreases in materialism over time are related to increases in subjective well-being, and vice-versa, in samples of adolescents and young adults. They support experimental evidence that inducing negative feelings increases materialism (Braun and Wicklund 1989; Chang and Arkin 2002), whereas inducing positive feelings decrease materialism (Chaplin and John 2007). Importantly, one of these longitudinal studies included a group of young people who were at risk of mental health difficulties, a group rarely studied in materialism research.

AC-Specific Socialization: Development of a Market-Driven Identity

Social identities developed in AC cultures are hybrid and complex, with the media playing a crucial role in their construction. The development of identity and practices of consumption come together in market-driven and media-based AC cultures where commodities take on a range of cultural meanings, associations, and illusions, becoming both a contributor and reflection of our individual selves (Featherstone 1991). Advertising stimulates desire and accesses identity-related processes by providing consumers with images and symbolic associations that convey market-driven ideologies pertaining to lifestyle, status, happiness, and well-being (Arnould and Thompson 2005). Moreover, recent evolutionary psychology approaches to marketing and consumer behavior suggest that the development of market-driven identities in AC societies are influenced by powerful evolutionary motives such as attracting and keeping mates, asserting status, and caring for a family (Durante and Griskevicius 2016; Miller 2009). In this respect, it is noteworthy that evolutionary motives and marketing in AC societies may not necessarily act in concert to promote well-being. For example, the small but significant effect sizes between advertising and unhealthy food consumption in children reported may be aided by an inherited preference for fatty and sweet foods which provided our ancestors with much-needed calories in a food-scarce environment (Durante and Griskevicius 2016). Moreover, images of wealth and beauty marshaled forth by advertisers to stimulate evolutionary-based motives to attract and keep mates may undermine the importance of using more adaptive

traits in decision-making about potential partners, such as intelligence and kindness that were accentuated throughout evolution (Miller 2009).

The AC model proposes that the destabilization of family life and employment in AC cultures has been accompanied by the ascendancy of AC-specific socialization processes characterized by individualistic and materialistic values. Dittmar (2007) argues that the “good life” and the “body perfect” are two fundamental ideals and myths of consumer culture that embody individualistic and materialistic values, and that individuals may become vulnerable to the adverse effects of AC cultures when they have become internalized (Dittmar 2007). These cultural values have been transmitted historically through advertising and the entertainment and fashion industries to stimulate consumption and are now also being transmitted through social exchanges using cultural technologies such as social media. That is, adolescents and adults are now reproducing these ideals online as valued components of their (idealized) selves (Pempek et al. 2009). With the dominance of social media, cultural values centered on attractiveness, success, and status, which benefit from visual display and involve self-presentation and impression management, have come to occupy a critical position in the progressive *objectification* of identity in AC cultures. This objectification of identity is believed to support and contribute to the fundamental position social comparison processes occupy in AC societies.

The Development of a Market-Driven Identity: Socialization of Children as Consumers

Children have come into their own as consumers. They are a rapidly growing primary market segment where increasingly sophisticated advertising and media techniques, and considerable investment and effort are expended to target them successfully (Kunkel et al. 2004; Moore 2004). In the USA, recent estimates are that advertisers spent more than \$1.3 trillion targeting the youth market via traditional media because of its strong contribution to the consumer economy (Horovitz 2011).

The signifying quality and value of commodities as identity-enhancing is captured by the concept of consumer brand identification (CBI; Stokburger-Sauer et al. 2012). CBI incorporates the notion that brands, as carriers of cultural and social meaning, can embody, inform, and communicate desirable consumer identities (Berger and Heath 2007; Lam et al. 2010). The child-brand relationship is a bond between a child and a brand characterized by a unique history of interactions that is intended to serve developmental and social-emotional goals in the child’s life (Ji 2008). Children aged 3 to 5 years already have an emerging recognition of brands (McAlister and Cornwell 2009) and brand imagery is clearly established in 7-to-10-year olds (John 1999). The sophistication of children’s self-brand connections develops between middle childhood and early adolescence (Chaplin and John 2005; Roper and La Niece 2009); by late childhood, they are related to social status, prestige, and group affiliation (Achenreiner and John 2003), and by early adolescence can become perceived by young people as keys to their identities and social status (Lindstrom 2004). Children’s brand relationships follow a typical developmental progression, with the formation of symbolic meanings starting within the family (Ji 2008; John 1999) and expanding in number and complexity through interactions with socialization agents such as peers and the media (Rodhain and Aurier 2016). Peers are particularly important for the meanings and social status associated with highly visible products such as clothing, games, and food consumed in a social context (Chaplin and Lowrey 2010; Lachance et al. 2003; Roper and La Niece 2009).

Studies of young people are consistent with adult research documenting relationships between high levels of consumption and materialism and consumption motivated by feelings of insecurity, low self-esteem, and desire for social status. In a self-report questionnaire-based study of 558 adolescents aged 12 to 19 from secondary schools in Brazil, materialistic orientation was the major driver in developing positive attitudes toward luxury brands, where young people who endorsed more underdeveloped self-beliefs showed a stronger tendency to want to display consumption behavior and impress others (Gil et al. 2012). Children from less-affluent UK families endeavor to conceal their relative poverty by buying expensive and high status brands (Bailey 2011), while children report feeling pressure to wear trainers also possessed by their more affluent peers, partly to fit in and partly to avoid teasing due to wearing unbranded clothes or coming from a poor home (Elliott and Leonard 2004; Roper and Shah 2007). From an evolutionary perspective, several adult studies indicate that conspicuous consumption involves “costly signaling” to enhance personal status and prestige through self-presentation to attract and retain romantic partners (Wang and Griskevicius 2013). Thus, the studies of children and adolescents cited above could also reflect early manifestations of evolutionary drives to assert status and to promote affiliation through consumption.

These empirical studies suggest that the socialization of children as consumers begins in early childhood and occurs within the contexts of parenting practices, family and peer relationships, and larger cultural contexts such as media culture. There are indications that children’s consumption of prestige brands is motivated by feelings of insecurity and poor self-image and possessing branded goods in key areas such as trainers and clothing communicates valued messages about happiness and social status to peers. These material goods act as embryonic indicators of the good life that accentuate the development of extrinsically-oriented motivation through social exchange. Consistent with this observation, research in samples of young people aged 8 to 15 years who were extrinsically motivated to achieve cultural ideals of the good life and the body perfect predicted their internalization, which negatively predicted well-being (Easterbrook et al. 2014). Recent longitudinal research supports associations between advertising and lower emotional well-being in children indirectly through materialistic values (Oprea et al. 2012), while a study of 557 children aged 9 to 13 in the UK found that children who spend greater time in front of the television and computer report more materialistic values, and those children higher in materialism report lower self-esteem (Nairn et al. 2007). The above studies provide provisional support for the proposition that cultural values interact with cultural technologies, leading to poorer well-being in vulnerable individuals.

Market-Driven Identity: Impact of Media Exposure on Identity and Well-being

The most empirically documented illustration of the interaction between cultural ideals and media exposure and its influence on well-being is in the area of body dissatisfaction and eating disorders. Striegel-Moore and Bulik (2007) summarize the key components of socio-cultural models of eating disorders supported by both longitudinal and experimental research: AC cultures propagate a female beauty ideal of extreme thinness and objectification of the female body as specific risk factors communicated pervasively through advertising and the entertainment and fashion industries, where images of thin female body types are overrepresented (e.g., Fouts and Burggraf 2000; Greenberg et al. 2003). With repeated exposure to media ideals, viewers begin to accept media portrayals of the thin ideal as typical and as representations of

reality. Some women internalize this ideal, experiencing a discrepancy between their own bodies and idealized images of the “Body Perfect” that leads to body dissatisfaction and disordered eating (e.g., Lawler and Nixon 2011; Stice 2002). Moreover, it could be added that the strength of food advertising for mostly unhealthy food products, make it extremely difficult to eat healthily, exacerbated conflict between ideal and reality leading to psychological symptoms. Body dissatisfaction appears to have become commonplace among American girls and young women, developing in girls as young as 7 years old (Dohnt and Tiggemann 2006; Grabe et al. 2008). In addition to being one of the most potent risk factors for eating disorders, prospective studies identify that body dissatisfaction is a significant predictor of low self-esteem, depression, and obesity in females (Grabe et al. 2007; Johnson and Wardle 2005; Neumark-Sztainer et al. 2006; Paxton et al. 2006; Tiggemann 2005).

Three meta-analyses in the area of body dissatisfaction and eating disorders support the hypothesis that media exposure to unrealistic cultural ideals concerning physical appearance and attractiveness can have an adverse impact on well-being (Groesz et al. 2002; Grabe et al. 2008; Ferguson 2013), albeit with small to modest effects. Furthermore, the most recent and comprehensive meta-analyses, including 204 studies, concluded that there were minimal effects for most females, with much greater effects for women with high pre-existing body dissatisfaction ($r = 0.26$) than for women with low preexisting body dissatisfaction ($r = 0.07$). Ferguson (2013) suggests a diathesis-stress model, where some females will be more susceptible to media influences and these influences will interact with and exacerbate pre-existing risk factors.

Studying university student populations, Ashikali and Dittmar (2012) found that priming materialism through experimental manipulation, namely exposure to advertisements of expensive, luxury goods, heightened the centrality of appearance to women’s views of themselves, and contributed to the activation of body-related self-discrepancies, especially for women high in self-reported materialism. These results are consistent with data from children and adolescents linking the two ideals of material success and physical attractiveness together as AC values that contribute to poorer well-being (Easterbrook et al. 2014). Similarly, two studies examining materialism and the internalization of body-perfect ideals in Icelandic students of both genders aged 18 to 21 found that a materialist value orientation was strongly related to the internalization of body-perfect ideals and also predicted body dissatisfaction (Guðnadóttir and Garðarsdóttir 2014). It is likely that values associated with physical attractiveness and material success are mutually reinforcing components of identity in AC cultures that can have significant effects on our psychological well-being. As noted throughout this paper, social comparison processes are an important driver of extrinsic values and market-driven identity. In their meta-analysis of data from 156 studies, Myers and Crowther (2009) found that social comparison was related to high levels of body dissatisfaction, while social comparison processes have been shown to predict materialistic values over and above variables including SES, emotional uncertainty and self-esteem (Kim et al. 2017).

Market-Driven Identity: Impact of Social Media Use on Identity and Well-being

The AC model predicts that internet use in the context of unstable and insecure interpersonal relationships, and/or where online communication is aligned with individualistic and materialistic socialization processes, is more likely to lead to detrimental consequences for identity and well-being. There is some support for these propositions. Longitudinal and cross-sectional studies

converge in discriminating positive effects of internet use from negative effects of internet use, based on whether communication complements existing close relationships or occurs with strangers, (Bessi re et al. 2008; Valkenburg and Peter 2007). These studies suggest that positive outcomes with adolescents and young adults are more likely to occur when their internet use is embedded in and extends close family and peer relationships, a conclusion consistent with a recent meta-analysis of 58 studies examining social media use and social capital across the age range (Liu et al. 2016). At the same time, social networking sites may also benefit some young adults by facilitating information exchanges with larger networks of more distant, weak relationships, particularly for individuals with low self-esteem (Ellison et al. 2007), and when online interactions compensate for low levels of social resources (Bessi re et al. 2008).

The extrinsic goal focus of AC cultures around attractiveness, status, and success are integral components of social media exchanges. The visual nature of these cultural technologies and importance of an audience facilitates progressive idealization and objectification of identity (Pempek et al. 2009), imbued with individualistic and materialistic values. In a pre-adolescent sample, fame was identified as the top cultural value, actively cultivated through social media use, which provided young people with an audience to respond to and shape their desire for recognition (Uhls and Greenfield 2012). In line with desires for social recognition, popularity, and fame, people on social networking sites present themselves positively (Dorethy et al. 2014), disseminating images of them looking their best (Manago et al. 2008) and engaging in good times with friends (Zhao et al. 2008). Moreover, individuals high in social comparison tend to engage in greater social media use and to experience negative psychological outcomes as a result (Vogel et al. 2015). In addition to fostering ideals associated with the popularity and success, the increased pressure for female sexual objectification has also been documented on social media (Manago et al. 2008).

While social media has very rapidly been permeated with AC socialization processes, it also allows for the exploration and development of possible selves (Manago et al. 2008). For example, Internet support is highly valued by LGBT youth who struggle to be accepted by their parents and immediate peers (DeHaan et al. 2013). It is also prudent to underline that social media use can have both beneficial and adverse consequences on well-being. A meta-analysis of 40 studies across the lifespan indicated a small detrimental effect of internet use on psychological well-being (Huang 2010), while a recent systematic narrative review concluded that the evidence was contradictory, with a marked absence of robust causal research regarding the impact of social media on well-being (Best et al. 2014).

In one of the few studies that examines the interaction of AC-specific stressors and AC-specific socialization processes, Baumgartner et al. (2012) studied the development of online and offline sexual risk behaviors from early to late adolescence. They found that the minority of adolescents who demonstrated high sexual risk online behaviors consisted of poorly-educated, high sensation-seeking adolescents from less cohesive families who spent more time communicating online. The association of risky online behavior with less family cohesion in the context of individual risk factors is consistent with the AC model. Greater research examining Internet use and identity and well-being, looking more carefully and causally at the ecology of the individual and at interactions between AC-specific stressors and AC-specific socialization processes, is needed.

Conclusions

This article presented an evidence-informed, integrative model of the impact of AC on well-being. The premise of this review was that AC is both an economic and macro-cultural system that exerts a profound influence on mental health and well-being and deserves greater examination and prominence in models of psychological adjustment.

The AC model identifies two distinct macro-cultural domains that interact to influence mental health and well-being. The first involves marked increases in family instability and employment insecurity that characterize AC economies, creating AC-specific stressors in these areas. The empirical literature suggests that culturally influenced instability and insecurity in these key life domains, interacting with concomitant deterioration in supportive familial and community structures, create serious challenges for children and adults. The fluidity with which attachments are formed and broken in AC cultures threatens the development of stable and satisfying interpersonal bonds and the trust that they are founded upon. Moreover, the failure to foster stable, secure and nurturing relationships is likely to endanger the life chances of children and perpetuate economic disadvantage. Growing job insecurity has compromised a growing proportion of the population's ability to participate economically in cultures where identity is based on material success, while undermining an important foundation for developing identities and life pursuits. Research suggests that relationships between family and employment instability and insecurity is borne to a greater degree by those who are poorer and less educated, highlighting education as a protective factor for managing AC-specific stressors. Moreover, job insecurity may be affecting younger adults to a greater degree, particularly young males, again creating vulnerabilities for future transmission of social and economic disadvantage. There are indications that country-level protective factors aid individuals, particularly those who are exposed to greater social and economic strain, in the form of well-developed welfare, health and educational provisions seen in CME.

The second domain of the model encapsulates the ascendancy of AC-specific socialization processes that promote individualistic and materialistic values. On the one hand, shifts toward individualistic values emphasizing self-fulfillment in AC countries since the 1970s, have contributed to increased societal tolerance and diversity (Kivivuori 2014) while emphasizing personal and political freedoms that are positively related to well-being (Johnson and Krueger 2006). There are indications that women's well-being has accrued benefits from AC, indicated by lower rates of suicide compared with males and by reducing their exposure to aggression such as partner violence.

At the same time, the ascendancy of individualistic values has been linked to significant demographic changes in AC countries toward more varied and unstable family formations (e.g., Harkonen and Dronkers 2006; Inglehart and Welzel 2005; Lesthaeghe 2014), undermining the development lifelong of relationships and the stability of bonds across the generations (Greenfield 2009). This paper argues that individualistic values in AC cultures have evolved toward a self-regarding individualism that emphasizes individual success, status and enhanced self-image. The adoption of more extrinsically oriented values often occurs at the expense of developing warm and stable interpersonal bonds and constitutes a risk to well-being. This paper provides evidence that children are socialized into this culturally sanctioned set of values, which are assimilated as part of the development of individual identity within AC market-driven cultures.

Social comparison processes are central to the development of market-driven identities in AC societies. They form an integral part of our self-evaluations and influence the value that we

place on our relationships with others. Social comparison processes are central to studies looking at within country comparisons of national prosperity and subjective well-being (Weimann et al. 2015), which may be intensified in more unequal societies (Buttrick et al. 2017). They also permeate communicative technologies such as advertising and social media and are associated with negative psychological outcomes related to both. Finally, social comparison processes are operative in the marriage market and in the development of materialism and some mental health problems.

Notwithstanding these conclusions regarding AC-specific socialization processes, the data is variable when assessing support for their influence on well-being. Substantial cross-sectional research and a small but convincing group of experimental and longitudinal studies support the deleterious impact of high levels of materialism on individual well-being. However, materialism research is primarily confined to community samples of predominantly white, well-educated adults, limiting our knowledge of how materialism may function in the context of more serious maladjustment and the array of risk and protective factors that contribute to well-being. The impact of individualism on mental health and well-being is uncertain and complicated. As a construct, greater precision and differentiation is needed between forms of individualism that may promote or hinder well-being in AC societies. As with materialism, further study of how individualistic values function in the context of other risk and protective factors in the individual's ecology is needed. Finally, a particular limitation of this field of cultural research is that national rankings establish cultures as individualistic compared with collectivistic, while different informants and reporting methods are used to measure mental health and well-being in young people, leading to varying effects (Bergeron and Schneider 2005).

A small but fast-growing body of research in evolutionary psychology, as well as gene-environment studies, implicate genetic contributions to individual's susceptibility to AC-specific stressors. There may be genetic contributions to family instability and interactions found in the literature, and complex developments detailed here between socio-economic status, education and child-rearing may involve evolutionary considerations (Griskevicius et al. 2011). Moreover, research studying evolutionary motives such as status-seeking and mate-seeking in the context of consumption suggests they play an important part in the current predominance of AC-specific socialization processes. In fact, evolutionary studies examining consumption and status-seeking suggest that AC consumer societies may sometimes harness and shape evolutionary motives in ways that may be counter-productive and that undermine well-being (Miller 2009).

While the evidence-informed model identifies vulnerabilities in AC societies that may contribute to poorer well-being, it is sensible to draw on the empirical literature to make recommendations to address these vulnerabilities and to enhance the benefits of AC societies. To promote family stability, the broad brushstrokes of encouraging women to delay fertility and to become economically independent, while improving the economic prospects of young men with lower levels of education, have previously been identified as priorities (McLanahan 2004). Reducing inequality and improving health, mental health and educational provisions would also promote greater family stability, including greater provision of parental leave benefits (Myrskylä and Margolis 2013). From a mental health perspective, the importance of parenting skills education (Kaveh et al. 2014) and early intervention to promote family stability and youth outcomes is well-established (Shonkoff and Meisels 2000). Relatedly, there is a need to refine evidence-based interventions to enhance their effectiveness with disadvantaged families. The provision of education and support through community networks to promote the benefits of long-term stable relationships would also help young people manage this challenge in AC societies (e.g., Family Stability Network 2018; <https://fastn.org/>).

Several initiatives have been undertaken to help young people deal with possible adverse consequences of AC-specific socialization processes. The impact of advertising and commercialism on children has been hotly debated, with reviews carried out by governments (e.g., Bailey 2011, UK report) and professional associations (e.g., Wilcox et al. 2004, American Psychological Association (APA)). Some investigators have suggested a complete ban on advertising to children due to its negative effects, associations with materialism, and the limited cognitive capacities of younger children to understand the purpose of advertising (Kasser and Linn 2016). Bans on advertising to children have occurred in AC economies such as Norway and Quebec and will be debated in the European Parliament in 2018. The approach advocated here is to deploy education, and parental and community support to enhance young people's agency and confidence in facing the challenges of a commercialized world. This includes using research and psychological expertise to inform government policy as well as corporate and school initiatives to minimize commercial practices that undermine children's emotional health (Wilcox et al. 2014). The promotion of safe and positive uses of social media to facilitate young people's growth is also relevant here (Byron, 2008).

There is also a broad need in AC societies to promote a balance between intrinsic values and extrinsic values. For instance, the family stability network aims to promote attitudes, behaviors, and skills that equip young people to build healthy, lasting relationships (<https://fastn.org/>). Psychologists can inform these types of initiatives, mindful of relevant research to help engage young people about the importance of intrinsic and extrinsic value orientations, respectively. The AC model would suggest that interventions for young people could usefully combine knowledge about intrinsic/extrinsic value orientations, commercialization, and social media use into one coherent framework.

In summary, the proposed evidence-informed model of the impact of AC finds broad support in the domain of AC-specific stressors on mental and health and well-being, and variable support across AC-specific socialization processes, with a particular need for further research to more precisely define these socialization processes, measure them rigorously, and study them within the larger array of factors that influence mental health. Moreover, while there is evidence to inform each of the separate domains of the model connecting AC and mental health and well-being, the interactions between domains have barely been investigated. Additionally, while the model seems to be generally supported across LME and CME, the preponderance of studies reviewed here are from LME. From a macro-cultural perspective, future research comparing well-being outcomes between LME and CME would be enlightening. This is particularly important in order to understand heterogeneity within AC cultures, and to help address the absence of comparisons between AC and non-AC countries. Given the substantial amount of cross-national research reviewed, it will also be crucial to include individual-level variables in the design of macro-cultural research, both to increase of understanding of individual adaptation in relation to the macro-cultural context, and to guard against interpreting data in such a manner that supports the ecological fallacy. Finally, this review is written to advance and stimulate scientific interest in the impact of a broad macro-cultural construct defined as advanced capitalism, and it is hoped that scientific evidence will continue to be brought to the debate regarding interactions between the individual and the cultural context that surrounds them.

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