

Cultural development and psychopathology

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Abstract

Culture plays a pivotal role in adaptive and maladaptive development. However, culture remains disconnected from theory, research, training, assessment, and interventions in developmental psychopathology, limiting our understanding of the genesis and epigenesis of mental health. Cultural development and psychopathology research can help overcome this limitation by focusing on the elucidation of cultural risk, protective, and promotive factors, at the individual and social levels, that initiate, derail, or maintain trajectories of normal and abnormal behavior. The goal of this Special Issue is to showcase research on the association between culture, development, and psychopathology that investigates equifinality and multifinality in cultural development, the interplay between culture and biology, cultural assessment and interventions, and cultural differences and similarities.

In its pursuit of understanding development in all its complexity, developmental psychopathology offers a profoundly humanistic view of individual agency. Individuals develop adaptation and maladaptation over time in response to previous experiences, current circumstances, and social and personal resources (Cicchetti, 1984, 1993; Sroufe & Rutter, 1984). No longer should individuals be studied in isolation, decontextualized, in a mechanistic fashion, or seen as bounded by essential features (Sroufe, 1990, 1997). Emergence, continuity, and change in the development of normal and abnormal behavior can only be captured reliably by considering all levels of human experience (Cicchetti & Dawson, 2002; Sroufe, 2007). Thus, research should incorporate a multiple levels of analysis approach and an interdisciplinary perspective (Cicchetti & Toth, 2015). However, social, emotional, cognitive, and neurobiological processes are not only levels of analysis but also core features of human development. The same is true for culture (Rogoff, 2003).

Yet, culture remains disconnected from theory, research, training, assessment, and interventions in developmental psychopathology, limiting our understanding of the genesis and epigenesis of mental health. Neglecting culture as a central dimension of human development threatens the validity of developmental psychopathology as a field of science and as a research paradigm. The pervasive disregard of culture is a roadblock for the progression of developmental psychology (García Coll et al., 1996) and developmental psychopathology

(García Coll, Akerman, & Cicchetti, 2000). Moreover, cultural experiences, influences, and processes play an important role in the emergence of adaptation and maladaptation (Seráfica & Vargas, 2006). Ultimately, ignoring the role of culture not only diminishes the scientific potential of developmental psychopathology but also betrays its humanistic promise of portraying human development and agency in all its richness. After all, culture is what makes humans unique from all other species (Whiten, Hinde, Laland, & Stringer, 2011).

Cultural Development and Psychopathology

In response to these challenges, this Special Issue focuses on cultural development and psychopathology, the emerging field that aims at advancing theory, research, assessment, and interventions that improves our understanding of the intersection of culture, development, and psychopathology. Cultural development and psychopathology is concerned with understanding the cultural risk, protective, and promotive factors, operating at multiple levels, that initiate, contribute, and maintain trajectories of normal and abnormal behavior (Causadias, 2013). Its central aim is to integrate culture and developmental psychopathology in a way that advances our understanding of human development. It promotes the study of the cultural processes related to developmental continuity and change, as well as elucidating the mechanisms and outcomes involved in the resolution of stage-salient developmental tasks (Causadias, 2013).

Cultural development and psychopathology acknowledges the contentious and multifaceted nature of the term *culture*, defined as a system of behaviors, symbols, values, and ideals that are generated and shared by a community, continued and changed from one generation to the next (Adams & Markus, 2004; Cohen, 2009). Culture is not restricted to the

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experience of racial/ethnic minorities (henceforth, minorities), as it is commonly misunderstood (Betancourt & López, 1993; Causadias, Vitriol, & Atkin, 2018a, 2018b), but is a normative dimension of human development (Jensen, 2012; Rogoff, 2003; Shweder et al., 2006). All humans are cultural beings because they are immersed in systems of practices and symbols, even if they differ in content. For instance, the use of language is present in all cultural, ethnic, and racial groups, even if they vary in important ways (Chomsky, 2014).

Consistent with developmental psychopathology's emphasis on multiple levels of analysis (Cicchetti & Toth, 2015), culture is better understood as unfolding both at the individual and the social levels (Kitayama & Uskul, 2011). The recognition of this dual nature of culture can help elucidate the cultural mechanisms that shape adaptation and maladaptation, and contribute to the etiology, expression, course, remission, or persistence of mental illness (Causadias, 2013). Culture operates at the social level because it provides meaning and goals to interpersonal, group, institutional, societal, and national systems. Culture is the software that runs our social hardware. It goes beyond single individuals because it is shared, created, and transmitted by a community (Rogoff, 2003; Shweder et al., 2006). This social dimension of culture is demonstrated in its connection to ethnicity and race, two concepts employed to represent group categorizations based on real or perceived commonalities, the social hierarchies these taxonomies reflect and enforce, and the biases and stereotypes they engender (Causadias et al., 2018a). For these reasons, culture is also related to issues of diversity and inclusion, to the problem of under- and misrepresentation of minorities in developmental sciences (Causadias et al., 2018b; García Coll et al., 2000).

Culture also functions at the individual level, as everyday participation in cultural communities' shapes social and cognitive development (Rogoff, 2003). Culture influences individuals as they engage directly or indirectly with cultural organizations, rituals, and ideals (Adams & Markus, 2004). Cultural socialization in the family, schools, peer groups, and neighborhoods shapes the way individuals see themselves and how they deal with developmental challenges (Causadias, 2013). This comprehensive socialization into systems of meaning, together with individual predispositions and agency, shapes the emergence of the cultural self, a cohesive organization that integrates ethnic-racial identity, social and gender roles, group belonging, moral commitments, cultural patterns of emotional display and regulation, learning styles, and problem-solving strategies (Causadias, 2013). This dual nature of culture, functioning at the social and individual levels, is embodied in cultural risk, protective, and promotive factors, as organizing forces in normal and abnormal development. Because these cultural factors are not static, but dynamic and subject to change, they are consistent with developmental psychopathology's probabilistic understanding of development (Sroufe, 1997).

Cultural risk factors are the processes that increase the likelihood of starting or sustaining maladaptive developmental

trajectories (Causadias, 2013). What makes these processes cultural is that they emerge from values, practices, symbols, and institutions deeply embedded in particular societies. For instance, racism in the United States exemplifies a cultural risk factor because it is a cohesive system of values, symbols, and practices that are learned and transmitted from one generation to the next, and serve the purpose of subordinating minorities to Whites (Bonilla-Silva, 2017). At the social level, it is perpetuated in laws, traditions, and institutions. At the individual level, it has a damaging effect in the development of minority youth exposed to its enactment through racial discrimination (García Coll et al., 1996).

Cultural protective factors are the processes that diminish the likelihood of developing psychopathology by buffering against adversity and risk (Causadias, 2013). For example, cultural coping strategies may ameliorate the effects of racial discrimination, including cultural pride (Gaylord-Harden, Burrow, & Cunningham, 2012), community support (Cooper, Brown, Metzger, Clinton, & Guthrie, 2013), and spirituality (Constantine, Donnelly, & Myers, 2002). These cultural protective factors challenge deficit models of minorities in which values, rituals, traditions, and community practices are portrayed as a source of risk although they often account for resilient functioning in the face of adversity (García Coll et al., 1996, 2000).

Cultural promotive factors are the processes that increase the probability of initiating and maintaining adaptive developmental trajectories (Causadias, 2013). While cultural risk and protective factors focus on psychopathology, cultural promotive factors relate to the development of health and well-being. These processes highlight that health is not merely the absence of illness, but competent adaptation to developmental and ecological demands. For example, family orientation, positive parenting, community practices, and bicultural adaptation among Latinos in the United States are related to well-being (Fuller & García Coll, 2010). However, cultural risk, protective, and promotive factors are dynamic and context dependent. A cultural protective factor at one age and setting can be protective, but it can become risky at another.

The goal of this Special Issue is to showcase articles that advance cultural development and psychopathology as an emerging field that studies the multiple ways in which culture influences adaptive and maladaptive development. These papers focus on four major themes: equifinality and multifinality in cultural development, the interplay between culture and biology, cultural assessment and interventions, and cultural differences and similarities.

Equifinality and Multifinality in Cultural Development

Several articles in this Special Issue investigate how culture is related to diversity in developmental processes and outcomes, one of the hallmarks of developmental psychopathology (Cicchetti, 1984; Sroufe & Rutter, 1984). They examine the multiplicity of contributing factors to normal or abnormal

outcomes, how they vary in their impact across individuals, and the numerous pathways to any specific developmental outcome (Cicchetti & Rogosch, 1996). These articles illustrate equifinality (i.e., the same outcome may be reached from different early cultural experiences and through various cultural processes) and multifinality (i.e., different developmental outcomes may result from similar cultural experiences and processes) in cultural development.

Cross, Hoffman, Constante, and Rivas-Drake (2018) investigated the concurrent and prospective associations of ethnic–racial identity content (i.e., centrality, private regard, and public regard) and depressive symptomatology with a longitudinal study of 148 Latino adolescents. Results showed that higher ethnic–racial centrality at Waves 1 and 2 predicted fewer depressive symptoms at Waves 2 and 3, respectively. Thus, ethnic–racial identity content may function as a cultural protective factor linked to lower depressive symptoms among Latino adolescents.

Gonzales, Johnson, et al. (2018) studied the role of bicultural adaptation, familism, and family conflict in Mexican American adolescents' cortisol reactivity. They assessed Mexican and Anglo cultural orientations, prospective associations between their patterns of bicultural orientation, and hypothalamic–pituitary–adrenal axis cortisol reactivity to an adapted Trier Social Stress Test in a sample 264 Mexican American adolescents at ages 12 and 14. Bicultural individuals showed high cortisol responsivity, which may be adaptive in the context of a strong acute stressor, whereas individuals endorsing only high levels of Anglo orientation had a blunted cortisol response.

Updegraff, Umaña-Taylor, Zeiders, Bravo, and Jahromi (2018) studied the development of familism in the transition to adolescent motherhood with a sample of 191 Mexican-origin pregnant adolescents who were having their first child. These individuals completed interviews during pregnancy and annually for 5 years after (Waves 1 through 6). Familism values were related to adolescent–mother figure warmth and conflict, coparenting communication, and social support from mother figures; however, no associations emerged for coparental conflict, adolescents' depressive symptoms, or self-esteem.

Gonzales, Knight, and colleagues (2018) tested the cultural gap–distress theory, which predicts increased parent–adolescent conflict and adolescent psychopathology over time when adolescents become less aligned with Mexican heritage values compared to their parents. With a sample of 749 families, they examined parallel trajectories of adolescents' and both their mothers' and fathers' heritage cultural values, and their associations with parent–adolescent conflict and psychopathology. Of the six profiles that emerged across dyads, only one was consistent with the hypothesized problem gap pattern.

Several papers included in the Special Issue focused on racism, racial discrimination, racial segregation, and unfair treatment as cultural risk factors in development. Gibbons, Fleischli, Gerrard, and Simons (2018) investigated the prospective relations between racial discrimination and subsequent negative affect (anger and depressive symptoms) and

smoking in a sample of 889 African American children. Racial discrimination at Wave 1 predicted smoking at Wave 6, controlling for multiple factors. Cultural socialization was associated with lower rates of adolescent smoking, and it buffered the relation between racial discrimination and anger.

Ong and Burrow (2018) studied whether individual differences in affective reactivity in response to daily racial discrimination, using 14-day diary reports, predicted subsequent depressive symptoms among 174 African American graduate and postgraduate students. Depressive symptoms were measured at two assessment points one year apart. Participants with increases in negative affect on days when racial discrimination occurred had higher depressive symptoms one year later.

Juang, Shen, Costigan, and Hou (2018) investigated the link between racial discrimination and adjustment across adolescence, gender, nativity, and region with a sample of 498 Chinese-heritage youth from the United States and Canada. Racial discrimination was consistently associated with poorer adjustment across all ages, but these associations were stronger in early adolescence for males compared to females, in middle adolescence for first-generation compared to second-generation adolescents, and in early adolescence for US compared to Canadian youth.

White, Zeiders, and Safa (2018) studied the role of racial residential segregation on the development of internalizing, externalizing, prosocial behaviors, and ethnic–racial identity resolution in a sample of 733 Mexican-origin adolescents assessed at three time points. Higher neighborhood Latino concentration during early adolescence predicted greater ethnic–racial identity exploration and lower discrimination from peers in middle adolescence. These benefits, in turn, were associated with lower externalizing and internalizing and higher ethnic–racial identity resolution, and prosocial behaviors in late adolescence.

Finally, Lam and colleagues (2018) examined whether perceived social status and unfair treatment moderated the link between shift-and-persist (shifting the self to stressors while finding meaning) and asthma symptoms in a sample of 308 youth who completed 2 weeks of daily diaries. Parents reported on perceived family social status. Shift-and-persist was associated with better asthma profiles only among youth with lower parent-reported perceived social status and only among youth who experienced more unfair treatment.

Investigating the Interplay of Culture and Biology in Development

Another main avenue to advance the emerging field of cultural development and psychopathology is through research on culture and biology interplay, or how culture, biology, and environments influence one another and shape development (Causadias, Telzer, & Gonzales, 2018; Causadias, Telzer, & Lee, 2017). Consistent with developmental psychopathology, this approach underlines complex and dynamic relationships among various areas of functioning (Causadias, 2013). Research on culture and biology interplay has been

structured into different domains that focus on the relationship between cultural processes and multiple levels of analysis, including cultural genomics, cultural neurobiology, and cultural neuroscience.

Several articles in this Special Issue focus on cultural genomics, or the numerous ways in which cultural experiences are influenced by, affect, and covary with the genome and the environment to shape behavior and cognition at the social, developmental, and evolutionary levels (Causadias & Korous, 2018; Moya & Henrich, 2016). Using a sample of 479 Mexican American and European American adolescents, Elam, Chassin, and Pandika (2018) examined polygenic risk scores for aggression in evocative gene–environment correlations and family cohesion and alcohol use. More family cohesion was associated with lower levels of alcohol use in early adulthood, and this link was stronger for Mexican American than for European American adolescents.

Lemery-Chalfant, Clifford, Dishion, Shaw, and Wilson (2018) investigated the role of genes in sensitivity to the effects of the Family Check-Up intervention on children's internalizing symptoms. Participants were a diverse sample of 515 youth and their families drawn from a multisite randomized prevention trial followed longitudinally. More sensitive children assigned to treatment had fewer internalizing symptoms than sensitive children assigned to the control condition.

Su, Kuo, Meyers, Guy, and Dick (2018) examined if polygenic risk for alcohol problems, peer deviance, and interpersonal trauma influenced trajectories of alcohol use disorder symptoms in a sample of 1,119 African American students across the college years. Polygenic risk did not predict trajectory of alcohol use. While peer deviance and interpersonal trauma were associated with more alcohol use disorder symptoms across college years, these effects were not moderated by either alcohol dependence polygenic risk scores or family history of alcohol problems.

Lehrner and Yehuda (2018) reviewed evidence on the intergenerational transmission of cultural trauma through epigenetic inheritance. They described epigenetics as the pathway through which environmental influences direct transcriptional activity and the expression or suppression of genes. They discussed challenges facing research on cultural trauma and posttraumatic stress disorder, and potential epigenetic mechanisms for transmission.

Another domain of research on culture and biology interplay represented in this Special Issue is cultural neurobiology, or the study of the transactions among cultural processes and stress-sensitive neurobiology across development, including the autonomic nervous system, the hypothalamic–pituitary–adrenal axis, and the immune system (Doane, Sladek, & Adam, 2018). Doane, Sladek, Breitenstein, and colleagues (2018) investigated whether familial influences were associated with indicators of typical physiological stress processes with a sample of 209 Latino adolescents. They examined familism values, perceptions of parent support, and daily family assistance behaviors in relation to hypothalamic–pituitary–adrenal axis diurnal patterns, indexed by salivary cortisol

five times a day for three days. Parental support was related with greater cortisol awakening responses, whereas familism values were not associated with diurnal cortisol patterns.

Lei, Beach, and Simons (2018) tested the degree to which neighborhood characteristics shape accelerated cardiometabolic aging with a longitudinal sample of 408 African Americans assessed from ages 18 to 29. Accelerated aging mediated the link between neighborhood disadvantage and chronic illness, even after adjusting for neighborhood selection effects. However, neighborhood collective efficacy buffered the link between neighborhood disadvantage and biological aging.

Hill and Hoggard (2018) studied the influence of rumination on the relationship between race-related stress and depressive symptoms in a sample of 69 young adult African American women. They also tested the moderating effects of John Henryism, a form of persistent and determined goal striving, and vagally mediated heart rate variability, a biomarker of coping. Race-related stress was associated with depressive symptoms through rumination, and both John Henryism and heart rate variability moderated the link between stress and rumination.

The third domain of research culture and biology interplay represented in this Special Issue is cultural neuroscience, the study of the interactions between culture, psychological processes, and the brain through neuroimaging techniques and other methods (Lin & Telzer, 2018). Muscatell, McCormick, and Telzer (2018) studied subjective social status and neural processing of race in a sample of 23 Mexican American adolescents. Using functional magnetic resonance imaging while they viewed Black and White faces in a standard labeling task, adolescents rated their subjective social status in American society. They found a negative link between subjective social status and neural responses in the amygdala, fusiform face area, and medial prefrontal cortex when adolescents viewed Black in contrast to White faces, suggesting enhanced salience of race for these youth.

Assessing and Intervening in Cultural Development

A third avenue to advance cultural development and psychopathology presented in this Special Issue is assessment and interventions in cultural development. Culture is often inferred based on demographic characteristics and approached cross-sectionally as a fixed and static influence (Causadias, 2013), failing to capture how cultural processes develop over time (Rogoff, 2003). This surface-level approach to culture may also explain the paucity in interventions that target cultural risk, protective, and promotive factors, and the individual and social levels. Translating this research into interventions that impact the development of psychopathology is a major challenge in the field (Cicchetti & Toth, 2006, 2009). Several articles showcased in this Special Issue address these issues.

Meca, Schwartz, Martinez, and McClure (2018) employed a three-year longitudinal data set of 216 immigrant Latino youth to examine the psychometric properties of the Bicul-

tural Involvement Questionnaire—Short Version and the Acculturation Rating Scale for Mexican Americans—II. They reported factor structures for these measures that differed from their hypothesized structure, as well as developmental divergence between them and indices of psychopathology.

Knight, Safa, and White (2018) proposed a developmental and contextual framework of multiple psychological dimensions and social identities to advance research on the role of cultural orientation in development and psychopathology. They emphasize how reliable and valid measures of cultural orientation, indexed by individuals' social identities, are essential for improving our understanding of the role of cultural orientation in development.

Korous, Causadias, Bradley, and Luthar (2018) conducted a second-order meta-analysis to investigate the magnitude of the association between behavior problems and specific measures of socioeconomic status (i.e., income, educational attainment, and occupational prestige) and overall social status. They identified 12 meta-analyses including 474 primary studies and 327,617 participants and found small negative associations between both internalizing and externalizing and income and education, while only externalizing was related to overall socioeconomic status.

Umaña-Taylor (2018) discusses how research on ethnic-racial identity offers a heuristic model for how culture can be examined developmentally and in relation to psychopathology. She presents the Identity Project intervention program and discusses how its outcomes deliver empirical support for the idea that cultural development can be modified with interventions, and that these changes can lead to mental health and social benefits for adolescents.

Yaylaci (2018) discusses the importance of interventions tailored to alleviate the impact of war, violent conflict, and displacement on the development and mental health of refugee children in general, and Syrian refugee children and families in Turkey in particular. She examines evidence of the role of war trauma on parenting and child development, and intervention strategies that can foster resilient functioning and well-being.

Understanding Cultural Differences and Similarities in Development

The last avenue to advance cultural development and psychopathology showcased in this Special Issue is through research on cultural differences and similarities in development. Group comparisons are central to developmental psychopathology. After all, considering normal and abnormal development together is the essence of the field (Cicchetti, 1984; Sroufe, 1990). However, cultural, ethnic, and racial comparisons are fraught with challenges. For instance, comparing minorities to Whites may reinforce deficit models that depict minorities as inherently flawed, lacking resources, and underperforming (García Coll et al., 1996, 2000). Exaggerating cultural differences can also support a deficit by difference approach, in which cultural differences reinforce deficit mod-

els (Causadias et al., 2018b). Nevertheless, there is no theoretical justification or empirical evidence to support the notion that developmental processes operate differently between White and minority individuals (García Coll et al., 1996). Research on cultural development and psychopathology can help elucidate the extent of differences and similarities in development between cultural, ethnic, and/or racial groups in an international context and in the United States. Several articles in the Special Issue pursue this aim.

Lansford and colleagues (2018) investigated parenting, culture, and the development of externalizing behaviors in nine countries, including China, Colombia, Italy, Jordan, Kenya, the Philippines, Sweden, Thailand, and the United States. They examined mother-, father-, and child-reported ($N = 1,336$ families) externalizing behavior problem trajectories from age 7 to 14. Children's externalizing behavior trajectories varied both across individuals within countries and across countries, and variation was larger at the individual level than at the national level.

Navarrete, Silva, van IJzendoorn, and Cárcamo (2018) examined physical and psychosocial development of Mapuche and nonindigenous Chilean toddlers in a longitudinal cohort of 12,398 children. Mapuches are the largest indigenous group in Chile, amounting to nearly 10% of the country's population. Mapuches showed fewer externalizing problems than nonindigenous Chilean toddlers. Socioeconomic status, quality of the home environment, and parenting stress were stronger predictors of socioemotional development than race/ethnicity.

Other studies focused on differences between Whites and minorities in the United States. Deer, Shields, Ivory, Hostin-ary, and Telzer (2018) used a sample of 370 adolescents to examine White-minority differences in affect and diurnal cortisol patterns, including diurnal cortisol slopes, cortisol awakening response, and diurnal cortisol output. Minorities exhibited flatter diurnal cortisol slopes and reported lower levels of positive affect compared to White youth. However, racial differences in affect did not explain differences in cortisol.

Dismukes and colleagues (2018) studied the effect of two dyadically based stress paradigms, the Still Face paradigm and the Strange Situation procedure, across the first year of life on cortisol reactivity in a sample of 207 Black and White infants. Racial differences in cortisol were not present at 4 months but emerged at 12 months of age, with Black infants having higher cortisol. Maternal reports of racial discrimination were linked to cortisol differences within Black infants, suggesting that caregiver experiences of racial discrimination may have early damaging effects in children.

Finally, Causadias, Korous, and Cahill (2018) studied the cultural differences hypothesis (i.e., that there are large differences between Whites and minorities, while there are small differences between- and within-minority groups) and the cultural similarities hypothesis (i.e., that there are small differences between Whites and minorities, and these differences are equal or lesser than differences between- and

within-minorities). They conducted a second-order meta-analysis on levels of psychopathology with 16 meta-analyses on 493 primary studies ($N = 3,036,749$) and found support for the cultural similarities hypothesis.

Conclusions

The articles included in this Special Issue advance research on cultural development and psychopathology by examining how risk, protective, and promotive cultural factors, operating at the individual and social levels, shape developmental pathways of normal and abnormal behavior. These articles display a diverse array of topics, methods, designs, samples, and theories that will hopefully advance our understanding of cultural development. This is crucial because an interdisciplinary approach is necessary to capture the complexity of adaptive and maladaptive development (Cicchetti & Dawson, 2002). Moreover, these articles offer valuable insights that can inform prevention and intervention research. Future randomized control trials should include measures at multiple levels of analysis to better document the effects of our interventions and the accuracy of our theories (Cicchetti & Toth,

2015). Assessing and intervening on cultural development at the individual and social levels are important steps in this direction.

It is also important to approach the research enterprise as a cultural phenomenon in itself. Scientific training is a process of cultural socialization into specific principles, concerns, assumptions, and ways of thinking about what is important and what is not (Cicchetti & Richters, 1997). For this reason, we need to change the way we think about culture. Change is also needed to the way we understand cultural risk, protection, and promotion at the individual and social levels. It is crucial to understand that cultural adversity is not destiny. Change is possible at any point in life because development is an active and dynamic process in which the meaning attributed to experiences shapes their consequences (Cicchetti & Rogosch, 1996). At the same time, there is coherence and continuity in the development of the person (Sroufe, 2007), and cultural adversity places those who experience it in probabilistic pathways of risk and maladaptation. Improving theory, research, training, assessment, and interventions in cultural development and psychopathology can help us understand and promote health, well-being, and competent development.

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