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Since its introduction to the scientific literature in the mid-1990s, developmental science has seen incremental refinements in research on resilience, which is a process or phenomenon reflecting positive child adjustment despite conditions of risk. In this chapter, we describe accumulated evidence on this construct in the field of developmental psychopathology and appraise critical directions for future work. We begin by briefly describing the history of work in this area through contemporary times, defining core constructs, and summarizing major findings on factors associated with resilience. In the second half of the chapter, we examine commonalities and differences between the resilience framework and a related, relatively new area of scientific inquiry: positive psychology. Our objective is to elucidate

ways in which progress in each of these areas might most usefully inform efforts in the other, collectively maximizing the promotion of well-being among individuals, families, and society.

Historical Overview of Childhood Resilience Research

The roots of resilience research can be traced back to pioneering research with children of schizophrenics during the 1960s and 1970s. Garmerzy (1974), along with Anthony (1974) and Rutter (1979), found that among these children at high risk for psychopathology was a subset of children who had surprisingly healthy patterns. Their scientific interest in the positive outcomes of these children reflected a notable departure from the symptom-based medical models of the time.

Expanding the research on resilience beyond children of mentally ill parents, Murphy and Moriarty (1976) examined vulnerability and coping patterns in children exposed to naturally occurring stressors such as deaths or injuries in the family. Shortly after, Emmy Werner published the first of many articles on the birth cohort from 1954 from the Hawaiian island of Kauai (Werner & Smith, 1982, 1992, 2001). Werner observed a number of protective factors that distinguished well-functioning at-risk youth from those faring more poorly, including strong, supportive ties with the family, informal support systems outside the home, and dispositional attributes such as sociability.

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The 1980s and early 1990s brought several changes in conceptual approaches to studying resilience, two of which were particularly salient. The first concerned perspectives on the locus of resilience. In early studies in this area, the effort had been to identify personal qualities of resilient children, such as autonomy or belief in oneself. As work in the area evolved, however, researchers acknowledged that resilient adaptation often may derive from factors external to the child. Thus, three sets of factors came to be commonly cited as central to the development of resilience: attributes of the children themselves, aspects of their families, and characteristics of their wider social environments (Garmezy & Masten, 1986; Rutter, 1987; Werner & Smith, 1982).

The second change involved conceptions of resilience as potentially fluctuating over time rather than fixed. In some early writings, those who did well despite multiple risks were labeled “invulnerable” (Anthony, 1974). Recognizing that this term implied that risk evasion was absolute and unchanging, researchers gradually began to use the more qualified term “resilience” instead. Implicit in this change of terminology was the recognition that positive adaptation despite adversity is never permanent; rather, it is a developmental progression with new vulnerabilities and strengths emerging with changing life circumstances (Garmezy & Masten, 1986; Werner & Smith, 1992).

Another critical qualifier rested in the recognition that resilience is never an across-the-board phenomenon, but can be, and often is, domain specific. Much as children in general do not manifest uniformly positive or negative adaptation across different areas of adjustment, researchers cautioned that at-risk children too can display remarkable strengths in some areas while showing notable deficits in others (Luthar, Doernberger, & Zigler, 1993).

Most importantly, children under stress could seem resilient in terms of their behaviors while still struggling with inner distress in the form of problems, such as depression and anxiety (Farber & Egeland, 1987; Luthar, 1991). Recognizing the heterogeneity in adjustment levels across domains, scientists now tend to use more circumspect terms that specify domains in which resilience is manifest, referring, for example, to

academic resilience (Obradović et al., 2009), emotional resilience (Jain, Buka, Subramanian, & Molnar, 2012), or external (behavioral) resilience (Yates & Grey, 2012).

Research on Resilience: Defining Critical Constructs

As noted earlier, resilience is defined as a phenomenon or process reflecting relatively positive adaptation despite experiences of significant adversity or trauma. Because resilience is a superordinate construct subsuming two distinct dimensions—significant *adversity* and *positive adaptation*—it is never directly measured, but rather is indirectly inferred based on evidence of the two subsumed constructs.

Adversity

In developmental psychopathology research on resilience, risk or adversity is defined in terms of statistical probabilities: A high-risk condition is one that carries high odds for measured maladjustment in critical domains (Luthar, 2006; Masten, 2001). Exposure to community violence or to maternal depression, for example, constitutes high risk given that children experiencing each of these factors reflect significantly greater maladjustment than those who do not. Aside from discrete risk dimensions such as community violence or parent psychopathology, researchers have also examined composites of multiple risk indices, such as parents’ low income and education, histories of mental illness, and disorganization in neighborhoods. Seminal research by Rutter (1979) demonstrated that when risks such as these coexist (as they often do, in the real world), effects tend to be synergistic, with child outcomes being far poorer than when any of these risks exists in isolation.

Positive Adaptation

The second component in the construct of resilience is positive adjustment: outcomes that are

substantially better than what would be expected, given exposure to a specific identified risk. In many studies of resilience across diverse risk circumstances, this concept has been defined in terms of behaviorally manifested social competence or success at meeting stage-salient developmental tasks (Luthar, Cicchetti, & Becker, 2000; Masten & Tellegen, 2012). Among young children, for example, competence is often operationally defined in terms of manifest secure attachment with caregivers, and among older children, in terms of aspects of school-based functioning.

In addition to being developmentally appropriate, indicators used to define “positive adaptation” must also be conceptually of high relevance to the risk examined in terms of both domains assessed and stringency of criteria used (Luthar, 2006; Vanderbilt-Adriance & Shaw, 2008). When communities carry many risks for antisocial problems, for example, it makes sense to assess the degree to which children are able to maintain socially conforming behaviors (Jain et al., 2012), whereas among children of depressed parents, the absence of depressive diagnoses would be of special significance (Beardslee, Gladstone, & O’Connor, 2012). With regard to stringency of criteria, similarly, decisions must depend on the seriousness of the risks under consideration. In studying children facing major traumas, it is entirely appropriate to define risk evasion simply in terms of the absence of serious psychopathology rather than superiority or excellence in everyday adaptation (Luthar et al., 2000; Rutter, 2012).

Whereas approaches to measuring risk can involve one negative circumstance, competence must necessarily be defined across multiple spheres, for overly narrow definitions can convey a misleading picture of success in the face of adversity [for a more in-depth discussion, see Luthar (2006)]. Furthermore, it should be noted that in some situations, competence is most appropriately operationalized in terms of better than expected functioning of families or communities, rather than the children themselves. To illustrate, toddlers are still too young to reliably be judged as manifesting resilience because their functioning is largely regulated by others; thus, it is more logical to operationalize positive adjustment in terms of the mother–child dyad or

family unit. In a similar vein, the label resilience can sometimes be most appropriate for communities of well-functioning at-risk youth. Research on neighborhoods, for example, has demonstrated that some low-income urban neighborhoods reflect far higher levels of cohesiveness, organization, and social efficacy than others (Jain et al., 2012; Leventhal & Brooks-Gunn, 2000), with the potential, therefore, to serve as important buffers against negative socializing influences.

As positive adaptation does not necessarily occur as part of a continuous trajectory, an important area of resilience research is concerned with those who “bounce back” from earlier dysfunction (Luthar & Brown, 2007; Masten, 2001; Rutter, 2012). Long-term prospective studies have been invaluable in identifying critical turning points not only in childhood but also across the life span, illuminating instances where apparently negative adjustment trajectories were transformed into positive, healthy ones (Hauser, Allen, & Golden, 2006; Sampson & Laub, 1993; Vaillant, 2012).

As we define terms, it is important to distinguish resilience from two related—and, in error, often conflated—constructs: competence and ego resiliency. Competence and resilience may be described as closely related subconstructs as both represent positive adaptation, but there are four major differences (Luthar, 2006; Yates & Masten, 2004). First, resilience, but not competence, presupposes risk. Second, resilience encompasses both negative and positive adjustment indices (absence of disorder and presence of health), and competence chiefly reflects the latter. Third, resilient outcomes are defined in terms of emotional and behavioral indices, whereas competence usually involves only manifest, observable behaviors. Finally, resilience is a superordinate construct that subsumes aspects of competence (along with high levels of risk).

A second overlapping construct—and one with which resilience is frequently confused (Luthar et al., 2000)—is *ego resiliency*, a construct developed by Block and Block (1980) that refers to a personal trait reflecting general resourcefulness, sturdiness of character, and flexibility in response to environmental circumstances. Commonalities with resilience are that both involve strengths. Differences are that (a) only resilience presupposes conditions of risk

and (b) resilience is a phenomenon, not a personality trait. Finally, just as competence is subsumed within resilience, ego resiliency has been examined as a potential predictor of resilient adaptation, that is, as a trait that could protect individuals against stressful experiences (Cicchetti & Rogosch, 1997; Eisenberg et al., 2010).

In developmental psychopathology research, it is critical that scientists proactively guard against any suggestions that resilience is essentially a personal trait, as this can foster perspectives that blame the victim (Luthar & Brown, 2007; Yates & Masten, 2004). Toward this end, several precautions have been noted for future studies (Luthar et al., 2000; Rutter, 2012). Most importantly, all reports should include clear definitions of resilience, unequivocally stating that it refers to a process or phenomenon and *not* a trait. Additionally, it is best to avoid using the term *resiliency*, which carries the connotation of a personality characteristic even more so than does *resilience*. Furthermore, it is prudent to avoid using the term resilient as an adjective for individuals and apply it instead to profiles or trajectories because phrases such as “resilient adaptation” carry no suggestion of who (the child or others) is responsible for manifest risk evasion.

Vulnerability and Protective Processes

The central objective of resilience researchers is to identify *vulnerability* and *protective factors* that might *modify* the negative effects of adverse life circumstances, and then to identify *mechanisms* or *processes* that might underlie associations found. Vulnerability factors or markers encompass those indices that exacerbate the ill effects of the adverse condition (e.g., poverty) on child outcomes, such as alienation from parents or a negative school climate. Promotive or protective factors are those that modify the effects of risk in a positive direction. Examples include support from caregivers and peers and strong social-emotional skills.

In the resilience literature, there have been two major approaches to identifying protective or vulnerability factors (or risk modifiers): variable-based and person-based statistical analyses.

Variable-based analyses such as multivariate regressions allow researchers to look at continuous scales of (a) adversity and (b) risk modifiers in relation to outcomes, examining how the latter are directly related (as main effects), and in interaction effects with the former. One of the first efforts to use this variable-based approach was the groundbreaking paper by Garmezy, Masten, and Tellegen (1984), demonstrating that high IQ was protective: Increases in life stress seemed to affect intelligent children far less than their low IQ peers. Person-based analyses in resilience research, on the other hand, involve comparisons between a group of children who are categorized according to their outcome and risk profiles. For example, comparisons of two groups of at-risk youth, manifesting high and low competence respectively, can illuminate critical factors that confer protection against adversity.

In both variable- and person-based analyses, a hallmark of the current generation of resilience research is attention to process: If studies are truly to be informative to interventions, they must move beyond simply identifying variables linked with competence toward understanding the specific underlying mechanisms (Luthar, 2006; Masten & Cicchetti, 2012). This need to unravel underlying processes applies to risk, vulnerability, and protective factors at multiple levels. With regard to risk transmission, for example, maternal depression can affect children through various environmental processes including negative family interactions and routines, and child behavioral and emotional problems (Valdez, Mills, Barrueco, Leis, & Riley, 2011). Similarly, protective factors such as high-quality caregiver–child relationships could benefit a child through multiple pathways including feelings of being supported, a sense of being cherished as an individual, and a strong set of personal values (Werner, 2012).

What Promotes or Mitigates Resilient Adaptation? Evidence on Salient Risk Modifiers

The science of resilience is, fundamentally, applied in nature with the central goal of informing efficacious interventions (Garmezy &

Masten, 1986; Luthar, 2006); accordingly, in reviewing evidence on risk modifiers, it makes sense to prioritize domains in terms of overall likelihood of yielding benefits in interventions (Luthar & Brown, 2007). In other words, it is most useful to focus primarily on risk modifiers that are (a) the most *influential*, with effects that are relatively enduring or robust, and (b) relatively *modifiable* (as are aspects of caregivers' functioning, as opposed to intrinsic characteristics, such as IQ or genetic vulnerability).

With this prioritization in mind, we present, in sequence, findings on risk modifiers within the domains of the family—the most proximal and the most enduring of children's environments—followed by the community, which can affect children directly, as well as indirectly through their parents. Children's own characteristics are presented third, recognizing that many of these risk modifiers can and often do promote resilient adaptation, but they are often, themselves, malleable to potent forces in the proximal and distal environments (cf. Luthar, 2006).

Family Processes

Of the many factors that affect the trajectories of at-risk individuals, among the most powerful is maltreatment by primary caregivers. Maltreatment co-occurs with many high-risk circumstances including parent mental illnesses, parental conflict, community violence, and poverty (Mersky, Berger, Reynolds, & Gromoske, 2009; Rogosch, Dackis, & Cicchetti, 2011), thus serving as a widespread vulnerability factor. Maltreated children show deficits spanning multiple domains including interpersonal relationships, emotional regulation, cognitive processing, and even linguistic development (Cicchetti, 2002). This degree of dysfunction is not surprising, given that maltreatment connotes serious disturbances in the most proximal level of the child's ecology, with the caregiving environment failing to provide typical experiences essential for normal development (Cicchetti, 2002).

Despite the inimical effects of maltreatment, profiles of adjustment are not homogeneous. Pronounced deficits are most likely to be

associated with greater severity and chronicity of maltreatment, as well as early age of onset (Cicchetti & Rogosch, 1997; Kim, Cicchetti, Rogosch, & Manly, 2009). In terms of protective processes, positive relationships with peers and high school engagement can mitigate the deleterious effects of maltreatment (Afifi & MacMillan, 2011; Williams & Nelson-Gardell, 2012). At the same time, research has suggested that even when maltreated children function well at some critical periods in time, this successful adaptation tends to be unstable across development (Thompson & Tabone, 2010).

As maltreatment thwarts resilient adaptation, conversely, positive, supportive family relationships are vital in maintaining good adjustment in the face of adversities. The critical importance of family relationships is recurrently emphasized in reviews of the literature (e.g., Luthar & Brown, 2007; Masten, 2001; Shonkoff & Phillips, 2000; Vanderbilt-Adriance & Shaw, 2008), resonant with early reports that the presence of a close relationship with at least one parent figure constitutes a potent protective factor (Garmezy, 1974; Rutter, 1979; Werner & Smith, 1982). Furthermore, the protective potential of positive parenting is evident not only in early childhood but in later years as well, through adolescence and even emerging adulthood (Burt & Paysnick, 2012; Steinberg, 2001).

Although maternal nurturance is widely discussed as critical for positive child development, high-quality relationships with other family members can also significantly modify the effects of adversity. For example, studies have established the protective potential of strong attachment relationships with fathers and father figures (Coley, 2001; Martin, Ryan, & Brooks-Gunn, 2010). Older siblings may often serve as critical role models, with younger siblings mirroring their profiles of high behavioral competence (e.g., Brody, Kim, Murry, & Brown, 2004) and, conversely, emulating their negative behavior patterns involving delinquency and substance use (Stormshak, Comeau, & Shepard, 2004). Finally, support from extended kin can be important in protecting at-risk youth. Among children exposed to harsh maternal parenting, for example, high levels of grandmother involvement can reduce the

risk of maladjustment in grandchildren (Barnett, Scaramella, Nepl, Ontai, & Conger, 2010).

Going beyond the general importance of strong attachments with parent figures, there are also contextually salient vulnerability and protective processes, or those that are important within particular family and cultural contexts. To illustrate, upper-middle class American youth, in general, are at considerably elevated risk for substance use, and perceived parental leniency on this front is a potent vulnerability factor for these teens' frequent use of alcohol, marijuana, and other substances (Luthar & Barkin, 2012). Among immigrant families, second-generation children's revocation of traditional family values and mores can be linked with elevated adjustment problems (García Coll & Marks, 2009). Among families affected by mental illnesses such as depression, unique protective processes include the child's understanding of the illness (including its potential causes), as well as the ability to maintain healthy psychological boundaries from the affected parent (Beardslee, 2002).

Recent years have seen an explosion of research on family genetic factors in adjustment and in particular, on G×E interactions (Grigorenko & Cicchetti, 2012; Kim-Cohen & Turkewitz, 2012); while clearly invaluable for basic science, these findings are unlikely to inform psychological interventions to foster resilience in the foreseeable future [for a detailed discussion, see Luthar and Brown (2007)]. Genetics research might suggest, for some, the potential to guide treatment as an understanding of biological pathways can inform pharmacotherapy. However, any such knowledge about "indicated pharmacotherapies" does not readily generalize to treating psychological problems (Luthar & Brown, 2007). In a recent review of relevant evidence, Dodge and Rutter (2011) concluded, explicitly, that the most direct practical implication of the G×E revolution belongs to the field of personalized medicine. Furthermore, the authors reaffirmed that any such personalized medicine is unlikely to reduce individual psychopathologies as (a) G×E interactions, even if replicated, tend to be very small, and (b) there is inevitably a plethora of other unmeasured risks generated by both genes and environments (Dodge & Rutter, 2011; Rutter, 2012).

Community Processes

As with maltreatment in the family, chronic exposure to violence in the community can have overwhelming deleterious effects that are difficult for other positive forces to override. Exposure to violence substantially exacerbates risks for a range of problems, encompassing internalizing symptoms such as anxiety, depression, and post-traumatic stress disorders (Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008; Walsh, 2007), as well as externalizing problems such as delinquent, antisocial behaviors (Aisenberg & Herrenkohl, 2008) and attenuated academic competence, social skills, and self-concept (Cedeno, Elias, Kelly, & Chu, 2010).

With regard to risk modifiers, support from parents can serve protective functions but, unfortunately, parents themselves are also highly vulnerable to the stresses of chronic community violence (Jain et al., 2012), experiencing high distress themselves and even, sometimes, displaying elevated maltreatment of children (Herrenkohl et al., 2008). Overall, the variability in children's responses to community violence is likely to be least pronounced if exposure is sporadic rather than chronic, and if it does not involve personally witnessing violent events or experiencing the loss of a friend or family member (Gorman-Smith & Tolan, 2003).

Whereas exposure to prolonged serious community violence is rarely overcome by other protective processes, there certainly are exosystemic forces that can attenuate the ill effects of other types of adversities. In particular, studies have documented the benefits of early exposure to high-quality childcare, where caregivers have positive personal characteristics and offer emotionally supportive caregiving (Maggi, Roberts, MacLennan, & D'Angiulli, 2011). In later years as well, supportive relationships with teachers in K-12 can be protective (Ebersöhn & Ferreira, 2011). To illustrate, when teachers identify the function of problem behaviors among at-risk youth and, in response, provide positive support strategies, there are significant benefits for adaptive behaviors (Stoiber & Gettinger, 2011).

Aside from teachers, relationships with informal mentors also can promote resilient adaptation

(Rhodes & Lowe, 2008). Examining the frequently stressful transition from elementary to middle school, Van Ryzin (2010) found that 40 % of the children named their advisor as a secondary attachment figure. Furthermore, those who did so reported greater engagement in middle school, and manifested greater gains in achievement and adjustment as compared to those who did not. With regard to mediators and moderators, mentoring effects tend to be mediated by improved family relations, while the duration and closeness of the relationship serve as significant moderators (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011).

Finally, positive relationships with peers can serve important ameliorative functions for at-risk children. Peer-assisted learning can result in significant increases in achievement (Neal, Neal, Atkins, Henry, & Frazier, 2011), and affiliation with peers who model responsible behavior (e.g., good students and good citizens) can mitigate, to some degree, the effects of violence exposure (Jain et al., 2012). At the same time, close friendships can confer vulnerability as well, particularly when they entail deviant behaviors. Youth who affiliate with deviant peers can engage in mutual “deviancy training” (Dishion, McCord, & Poulin, 1999), resulting in poor outcomes across multiple domains including conduct disturbances, substance use, and academic problems (Tiet, Huizinga, & Byrnes, 2010; Véronneau & Dishion, 2010).

Moving from the relatively proximal extrafamilial contexts of school, mentors, and peers to those more distal, aspects of the neighborhood may also play an important role in buffering risk for children. Particularly important are social organization processes in the neighborhood, which involve features such as high levels of cohesion, a sense of belonging to the community, supervision of youth by community adults, and high participation in local organizations (Rios, Aiken, & Zautra, 2012; Zimmerman & Brenner, 2010). Such social processes can help buffer the impact of structural characteristics of the community such as poverty or violence (Jain et al., 2012), by providing, for example, opportunities for structured and supervised extracurricular activities (Peck, Roeser, Zarrett, & Eccles, 2008).

In a similar vein, support gleaned from involvement in religious communities can be beneficial (Pargament & Cummings, 2010), with the buffering effects of religiosity on adolescent maladjustment often operating by increasing social resources and promoting prosocial behaviors (Sherman, Duarte, & Verdelli, 2011).

Individual Attributes

Intelligence is perhaps the most commonly mentioned personal asset in promoting resilient adaptation. Studies on diverse risk groups find that individuals with high IQs tend to fare better than others, with the underlying mechanisms potentially entailing superior problem-solving skills as well as a history of successes (e.g., at school or work) over time (Luthar, 2006; Masten, 2001). At the same time, there is much evidence that continuing adversities in the proximal environment can mitigate this personal asset. Young children exposed to chronic adversities such as domestic violence in the home or institutionalized care show significantly lower IQ scores than their counterparts who are not exposed to these risks (Koenen, Moffitt, Caspi, Taylor, & Purcell, 2003; Rutter, 1998; Sameroff & Rosenblum, 2006).

One might argue that the protective potential of high IQ would be more “fixed” later in development; although probably true, the evidence is not unequivocal, even at older ages. Among multiple samples of low-income adolescents (see Luthar, 2006), intelligence was not found to be protective; on the contrary, there were suggestions that bright youth may be more sensitive than others to negative environmental forces. Among adults, Fiedler (1995) reported that high-IQ people showed leadership success under conditions of low stress, but that when stress was high, IQ was inversely correlated with leadership success. Findings such as these have been viewed as suggesting that the manifest “benefits” of innate intelligence can vary substantially, depending on the potency and chronicity of risks in the proximal environment.

The previously described evidence on intelligence is paralleled by similar evidence on temperament, also shown to confer protection against

stress, with benefits found in relation to diverse adjustment outcomes (e.g., Eisenberg et al., 2010; Murry, Bynum, Brody, Willert, & Stephens, 2001). Temperamental differences can be seen as early as 4 months of age and they show continuity over early childhood (e.g., Kagan, Snidman, & Arcus, 1998). At the same time, the manifestation of temperament can be modified by environmental features. As Rutter (2000) has underscored, scientists have long moved past the point of assuming that “constitutional” factors are unalterable; whereas some children may tend to be more impulsive or oppositional than others, their interactions with the world contribute to determining the behavioral conformity they display in everyday life.

Similar cautions apply to inferences about the positive personality traits. Shiner and Masten (2012) have demonstrated significant long-term beneficial effects for childhood conscientiousness, agreeableness, and openness, as well as low neuroticism, even after controlling for childhood adversity. Whereas these findings undoubtedly indicate that personal strengths can help individuals overcome the effects of childhood life stressors, it is important to note also that even among adults, positive personal attributes are typically maximized only in the scaffolding of supportive interpersonal contexts. Kashdan and Steger (2011) have presciently emphasized that across the life span, individuals can possess strengths without necessarily using them: Context is critical in maximizing their use. We discuss this issue in depth in the section that follows.

Resilience and Positive Psychology

In terms of central research questions and constructs, the scientific study of resilience has much in common with other disciplines including the long-standing fields of risk research and prevention science [for a more in-depth discussion, see Luthar (2006)]. In this chapter, we focus specifically on differences and similarities with the relatively new but burgeoning field of positive psychology, with an emphasis, specifically, on useful directions for future work in both areas.

As resilience research began over 60 years ago with a focus on strengths and not just disorder, the field of positive psychology, christened in the early 1990s, was established to address the negative bias and medicalization that suffused psychological research since the end of the Second World War (Peterson & Park, 2003). As its name suggests, positive psychology is the study of positive emotions (e.g., joy and hope), positive character (e.g., creativity and kindness), and positive institutions (e.g., family, communities, and the workplace; Seligman & Csikszentmihalyi, 2000). In the decade since its inception, positive psychology has witnessed impressive refinements in both theory and research, as exemplified most recently in a seminal edited volume designed to “take stock, and move forward” (Sheldon, Kashdan, & Steger, 2011).

Differences

At this stage in the ontogenesis of the two fields, there are some substantive differences between positive psychology and resilience research, among the most prominent of which is the consideration of life adversities. As noted before, studies of resilience presuppose exposure to extreme adversity, whereas positive psychology concerns all individuals, not just those who have experienced major risks [although there are now increasing inroads into studies in the context of adversity, such as those of stress-related growth (Park, 2010) and those showing that character strengths can protect against major illness (Peterson, Park, & Seligman, 2006)].

The second difference concerns the centrality of developmental issues, which are at the very core of resilience research (Luthar, 2006; Masten, 2001), not only during childhood and adolescence, but also across adulthood (Collishaw, Maughan, Goodman, & Pickles, 2004; Hauser et al., 2006; Sampson & Laub, 1993; Staudinger, Freund, Linden, & Maas, 1999; Vaillant, 2012). Positive psychology by contrast has been focused largely on adults, although there are now increasing calls for attention to developmental variations, critically examining whether findings on

particular adult samples might generalize to children and to adults at different stages of the life span (see Oishi & Kurtz, 2011; Roberts, Brown, Johnson, & Reinke, 2002).

Third, studies of resilience, grounded firmly in the discipline of developmental psychopathology, adhere to a core, defining feature of this field: that studies of normal development aid our understanding of atypical processes and, conversely, studies of the atypical inform our understanding of normative development (Luthar, 2003; Yates & Masten, 2004). Thus far, in positive psychology, the tendency has been to “use the normal as a base from which to understand the abnormal, rather than *also* [emphasis added] using the abnormal to illuminate the normal” (Hames & Joiner, 2011, p. 314).

The fourth difference pertains to operationalization of positive outcomes, and in this regard, there are two distinctions. First, resilience researchers have considered both the presence of competent, healthy adjustment, as well as the evasion of psychopathology (when individuals are exposed to severe or chronic stressors; cf. Luthar & Brown, 2007; Rutter, 2012). In its early years, positive psychology was concerned only with positive aspects of adjustment and health promotion. Again, recent appraisals of the first decade of this science (Sheldon et al., 2011) have led to exhortations to consider negative dimensions as well, because some of these aspects can be beneficial. Anger, for example, mobilizes us to defend ourselves, and sadness is linked with critical and detail-focused thinking, which is important for certain kinds of problem solving (Oishi & Kurtz, 2011). More broadly, Ryff (1989) has noted that from a lifespan developmental perspective, psychological health results from active engagement of all that life has to offer—the positive, as well as the negative, just as Wong (2007) has argued, if positive psychology is to address the full potential of human beings, it must do so by addressing the challenges brought by life along with the successes.

The second difference in operationalizing positive outcomes concerns the parameters used to define healthy or optimal development. When studying children, resilience researchers have, tra-

ditionally, emphasized overt behavioral success as judged by proximal others—adaptive behaviors as rated by teachers, friends, parents, or others. In positive psychology, by contrast, there do not seem to be efforts to ascertain *others'* opinions on whether the individual is doing well—as a good spouse or parent, for example, or as a colleague at work. In fact, even when there are constructs tapping into interpersonal themes, these largely involve the individual's own reports, with social acceptance defined in terms of individuals having positive attitudes toward others and social integration as individuals' feelings of being supported by their communities (Keyes & Lopez, 2002). Heavy reliance on self-reports can be a particularly salient source of bias in positive psychology, because many of the constructs studied are socially desirable and people tend to want to portray themselves favorably (Lambert, Fincham, Gwinn, & Ajayi, 2011). Thus, there is a pressing need for greater consideration of indicators not based in self-reports (Nofhle, Schnitker, & Robins, 2011).

Conversely, there is an important lesson that those of us seeking to maximize childhood resilience could learn from positive psychology, and that is that we need to consider positive subjective experiences. Developmental studies commonly include assessments of children's feelings of depression, anxiety, or low self-worth, but we rarely ask youth about their own feelings of happiness or life satisfaction. In the future, it will be important for childhood resilience researchers to consider not only the degree to which young people conform to adults' expectations and evade distress but also the degree to which they themselves subjectively experience feelings of happiness, hope, and optimism.

Similarities

Despite these areas of difference, it should be emphasized that resilience research has many similarities to positive psychology. First, as both disciplines have matured, there have been ongoing critical appraisals of the scientific integrity of the corpus of work, examining issues of operational definitions, methodological approaches,

and veridicality of conclusions (e.g., Lopez & Snyder, 2009; Luthar et al., 2000; Rutter, 1987, 2000; Sheldon et al., 2011; Synder & Lopez, 2002; Vanderbilt-Adriance & Shaw, 2008). In both cases, for example, there have been in-depth discussions about whether and why the field warrants a distinct identity as opposed to representing just a new term for other, long-established spheres of inquiry, such as competence (Luthar et al., 2000; Yates & Masten, 2004) or positive emotions (Oishi & Kurtz, 2011). Both fields have witnessed an emphasis on ensuring that research that is grounded in a set of strong organizing theory, with specific suggestions proffered in this regard (Lambert et al., 2011; Luthar et al., 2000; Sheldon et al., 2011; Vanderbilt-Adriance & Shaw, 2008).

In terms of central goals of research, Michael Rutter's seminal 1987 paper spawned concerted efforts among resilience researchers to understand the underlying processes or mechanisms via which a given promotive or vulnerability factor may operate, and we are now witnessing similar exhortations in positive psychology. For example, Oishi and Kurtz (2011) noted that random acts of kindness make people happier, but we need to disentangle the major underlying mechanisms, illuminating whether these feelings occur because people see themselves in a positive light, or because they build a sense of trust and social capital. As emphasized earlier, disentangling these mechanisms is particularly critical when designing interventions.

Another parallel is that both disciplines entail concerted attention to interlinked, mutually beneficial salutary constructs. Rutter (1987, p. 57, 316–331) described “chain” effects, wherein, for example, the quality of family relationships affects children's sense of self-worth and attachment security, which, in turn, promotes openness to other potentially supportive relationships. Resonant with this premise is Fredrickson's (1998, p. 300) “broaden and build” conceptualization, where positive emotions—of joy, engagement, meaning, and, perhaps most importantly, love—“serve to broaden an individual's momentary thought-action repertoire, which in turn has the effect of building that individual's physical, intellectual, and social resources.”

Researchers in both fields have faced the complexities of defining “doing well,” given that meaningful variations exist across domains of adjustment. Just as childhood resilience has long been recognized as being a non-unidimensional construct (Luthar et al., 1993), increasingly, vicissitudes in adjustment are noted in the positive psychology literature. To illustrate, McCrae (2011) has argued that people have different personal strengths, some of which can work against each other, wherein high levels of conscientiousness, for example, can run counter to personal growth. In broadly defining the life well lived, similarly, Little (2011) has cautioned that an individual's exuberant pursuit of personally meaningful life goals can create problems for family members.

In the field of resilience, we have long grappled with these complexities of varying profiles of competence, compelled, eventually, to confront the fact that choices must be made in prioritizing particular domains—and that such prioritization must be made on strong theoretical grounds (Luthar et al., 2000). As noted in the first half of this chapter, our operationalizations of doing well are always conceptually related, first, to the nature and severity of the particular risk experienced (e.g., emotional resilience among children of depressed parents, or behavioral resilience among youth at risk for conduct disorder). Currently, there is a plethora of constructs subsumed in the field of positive psychology, ranging from happiness [with various connotations; see Algoe, Fredrickson, and Chow (2011)] to meaning making, altruism, selflessness, gratitude, and wisdom. As the field moves forward, an important scientific task will be to derive, consensually, some prioritization or hierarchy of dimensions that are deemed most central to operationally defining whether a life has, indeed, been lived well (see Sheldon et al., 2011), as opposed to other dimensions that are potentially informative, but not cardinal.

At a substantive level, both fields are fundamentally applied in nature, seeking to make a difference. In both cases, an initial scientific interest in uncovering basic psychological processes has led to acknowledgements that the central goals

are to benefit humanity (Csikszentmihalyi & Nakamura, 2011; Luthar & Brown, 2007; Sheldon et al., 2011; Yates & Masten, 2004). And with this applied focus in mind, scientists in both fields explicitly highlight the charge of proactively and responsibly disseminating our work. Acknowledging early and often well-deserved criticisms of research on resilience (and the inherent appeal of this notion to the lay public), Luthar and Cicchetti (2000) underscored the need for the highest possible standards of evidence and self-scrutiny in dissemination. In a similar vein, Kashdan and Steger (2011) cautioned against the rush of excitement to share new knowledge in positive psychology, noting that it is critical to obtain replications and seek alternative explanations, with the onus of responsibility doubled when research offers directions for interventions (see also Biswas-Diener, Kashdan, & King, 2009).

Perhaps most importantly, the core findings derived from accumulated work in both areas are strikingly similar. A review of 50 years of research on resilience—among children as well as adults—led to the simple conclusion that “Resilience rests, fundamentally, on relationships” (Luthar, 2006, p. 780). Strikingly resonant is Zautra’s (2014) assertion, “Resilience is social, after all,” and Peterson’s (2006) “three-word summary of positive psychology: *Other people matter*” (p. 249). Reis and Aron (2008) noted that human love is part of a constellation of evolved regulatory mechanisms with enormous significance for positive adjustment, as Lambert et al. (2011) note the recurrent acknowledgement in the positive psychology literature that close relationships are essential to individuals’ well-being (Diener & Oishi, 2005).

In terms of how our science can best benefit humanity, cognizance of the fundamental importance of relationships has led resilience researchers to emphasize attention to proximal contexts in any efforts to improve personal strengths. As long as individuals remain in interpersonal settings that are damaging to their psychological adjustment, any pull-out, short-term efforts to promote particular skills will have limited value (Luthar & Brown, 2007; Pianta & Walsh, 1998). Increasingly,

there is explicit emphasis on context within positive psychology interventions as well, as seen in Gillham, Brunwasser, and Freres (2008) school-based program to promote positive child attributes (e.g., empathy and self-control), while developing these skills within the teachers themselves. As the fields of resilience and positive psychology continue to delineate key principles for future interventions, we hope that there will be a steadfast attention, in both cases, to individuals’ contexts. Kashdan and Steger’s (2011, p. 13) words of caution must be heeded by scientists in both fields, equally: “If positive psychology is going to progress at the scientific and applied level, context can no longer be underappreciated, ignored, and untreated” (Kashdan & Steger, 2011, p. 13).

Future Directions

In concluding, we present two themes that we believe merit much greater attention by positive psychologists and resilience researchers alike, in formulating future theories, research, and practice implications. The first is despite our shared emphasis on the positive and salutary, we must explicitly recognize that “bad is stronger than good” (Baumeister, Bratslavsky, Findenauer, & Vohs, 2001, p. 323): People are generally much more deeply affected by negative feedback such as rejection than by positive ones such as praise. For positive psychologists, this would imply the need for explicit recognition that if individuals are to flourish, experiences of positive emotions (e.g., joy or hope) must collectively outnumber experiences of negative ones (such as fear, sadness, or guilt)—by a ratio as high as three to one (Fredrickson & Losada, 2005). In parallel, even as resilience researchers urge attention to strengths of families and communities, our first order of business must be to attend to known potent toxins. Research has established incontrovertibly, for example, that chronic maltreatment is insidious and rarely overcome by other protective processes; yet, such forces are not always identified as *primary and essential targets* for at-risk populations. With survival threatened, positive attributes cannot flourish.

Second, in operationalizing optimal outcomes in both fields, the notions of generativity, or doing for the greater good, must be given much greater priority with these attributes rated by others and not just by the self. In positive psychology, the most compelling definition of “a life well lived,” arguably, would be not just self-reported health and happiness but when adults are judged as committed to doing for others, with positive contributions to society (Bermant, Talwar, & Rozin, 2011; Little, 2011). Similarly, generativity can (and should) be considered a core positive outcome in operationalizing resilience among children and youth. We need to move beyond social conformity and academic grades to focusing on behavioral manifestations of kindness, generosity, and selflessness. If the shared goal of these two scientific disciplines is, ultimately, to promote the well-being of humanity, then humanitarian acts must be central in our own scholarly efforts—in our theories, research foci, and above all, in the messages disseminated to the public and policy makers.

In summary, resilience research and positive psychology have much in common. As both fields continued to mature—retaining the highest standards of scientific inquiry—we face many of the same challenges. We each will need to arrive at some prioritization of which, among dozens of criteria, must be treated as integral in defining the “life well lived,” and must critically appraise this question at different developmental stages across the life span. Notwithstanding our shared conceptual commitment to strengths and assets, we must be attentive to coexisting inimical influences that can powerfully thwart these. And beyond the thriving of individuals, we must focus on what individuals do to benefit others including family, friends, and society, and on how such generativity might best be fostered. Such a focus will keep us true to what has been emphasized by past presidents of the American Psychological Association across many decades (Zigler, 1998): that a central aim of psychology, as a broad discipline, must be to serve the public good and to promote the welfare of humankind.

Acknowledgements We gratefully acknowledge funding from the National Institutes of Health (R01DA014385,

R13 MH082592, R01 DA010726). Our sincere thanks to Sasha Heinz for valuable input on prior drafts and to Nina L. Kumar for assistance in background research.

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