

COMMENTARY

Beyond Resilience: Why We Need to Look at Systems Too

Jessica Shaw

U.S. Department of Justice, Washington, DC

Kate C. McLean

Western Washington University

Bruce Taylor

NORC at the University of Chicago

Kevin Swartout

Georgia State University

Katie Querna

University of Washington

Objective: Stories of resilience abound in American culture, and many social scientists have dedicated their programs of research to understanding what engenders resilience and developing interventions to promote it. However, too often our discussions on resilience limit it to something within the individual, effectively placing all responsibility for overcoming adversity on that individual. In this commentary, we caution against designing resilience research that fails to attend to system-level variables and how this approach can inadvertently reinforce the social circumstances it intends to help individuals overcome.

Key Takeaways: The construct of resilience is multifaceted and multilevel, yet the majority of resilience research in the field of psychology operates at the individual-level of analysis. Several theories, approaches, and methods can aid resilience researchers in becoming more ecological. **Conclusion:** Through a renewed commitment to multiplicity in our research, we can better meet the needs of our communities and promote success.

Keywords: resilience, systems, community-based participatory research, social network analysis, multilevel modeling

I think I could change, like maybe things will get better for me and maybe things won't be so depressing . . . umm well, if you look at the pattern of life, everything eventually does change. I mean we made history recently about having a president who wasn't Caucasian. I think that if that can happen, then anything can happen.

—17-year-old Josie

Stories of resilience are some of the most salient that many Americans hear. Whether or not any particular individual identifies with that narrative, it is undeniable that themes of resilience inhabit

popular movies and books, newspapers and celebrity magazines, sports coverage, and election cycles. These stories showcase individuals who have overcome great odds: cancer, job loss, crime victimization, poverty, abuse. Often these stories come with a redemptive component, a narrative with which Americans resonate, a narrative that even defines one as *being* American (McAdams, 2013). The reach of this narrative is evident in the interview with 17-year-old Josie, quoted above (see Breen & McLean, in press; McLean, Wood, & Breen, 2013). Josie's interview revealed experiences with drugs, violence, rape, suicidality, mental illness, and poverty. Despite these obstacles, she reported hope for the future and pointed to the American narrative of redemption, as captured in the personal story of President Obama. These stories make success, emancipation, atonement, and recovery seem possible with enough hard work.

Josie's focus on a specific individual's ability to overcome is common. Psychologists also tend to focus on individual characteristics in understanding resilience. Many researchers agree that resilience itself is a process rather than a trait (for a review, see Khanlou & Wray, 2014) but one that exists within the individual. Traits such as intelligence, hardiness, sociability, grit, and optimism are often seen as protective factors that can help people overcome challenging circumstances (Duckworth, Peterson, Matthews, & Kelly, 2007; Masten, 2001) and are viewed as foundational pieces of resilience.

Jessica Shaw, National Institute of Justice, U.S. Department of Justice, Washington, DC; Kate C. McLean, Department of Psychology, Western Washington University; Bruce Taylor, NORC at the University of Chicago; Kevin Swartout, Departments of Psychology and Public Health, Georgia State University; Katie Querna, School of Social Work, University of Washington. Jessica Shaw is now with the School of Social Work, Boston College.

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Correspondence concerning this article should be addressed to Jessica Shaw, School of Social Work, Boston College, McGuinn Hall 129, 140 Commonwealth Avenue, Chestnut Hill, MA 02467. E-mail: jessica.shaw.3@bc.edu

Although this temptation to focus on what makes an individual overcome adversity is consistent with valued cultural narratives, it turns our attention away from other important factors in resilience—structures and systems that can either exacerbate adversity or support success. Indeed, the unique features of the Protestant work ethic and its implicit spirit of individualism are responsible for the success of capitalism and the enduring narrative of the “American Dream,” which suggests an equal opportunity for all to reach their highest potential regardless of their circumstances at birth (Adams, 1931; Weber, 1905). These values of perseverance and resilience (“pulling yourself up by your bootstraps”) shaped U.S. economic structure and social welfare policy (Esping-Anderson, 1990; Garfinkel, Rainwater, & Smeeding, 2010; see also McAdams, 2013) and have also stratified along lines of gender and race (Massey, 2009). Critically, the idea of personal resilience that is integral to the American Dream narrative fails to account for these historical and structural inequities that both endure today and pathologize the individual for being unable to “work hard enough” to overcome such formidable foes as racism,

sexism, and historical trauma (G. Almgren, personal communication, October 15, 2012). In this commentary, we discuss the importance of incorporating system-level variables into resilience research and exploring how mechanisms at multiple levels of analysis can support and promote well-being. Table 1 provides a summary of key points.

So What’s Wrong With Resilience?

There is great diversity in academic thinking in regard to resilience (Bhamra, Dani, & Burnard, 2011). This multidisciplinary, multifaceted, and multilevel concept has been researched within the context of physical, ecological, and socioecological systems, and through the lens of disaster management, organizational behaviors, social engineering, and psychology (see Bhamra et al., 2011). Across these domains, resilience researchers are interested in understanding why and how systems, organizations, or individuals are able to press on despite some disturbance, significant change, or adversity. The field of psychology is interested partic-

Table 1
Commentary Key Points

	Key point
Background	Resilience is a key component of the idealized American work ethic, and it is a useful construct and target for interventions across the social sciences.
Nature of concern with use of resilience in psychology	Individual traits such as intelligence, hardiness, sociability, grit, and optimism are protective factors that can help people overcome challenging circumstances. The full utility of resilience is often not realized when only conceptualized at the individual level, without attention to its role at the community or system level in trying to promote well-being through research or intervention. Approaches should be revisited and revised to measure the systems and sources of adversity that resilient community members overcome.
General approach to the concerns raised in this commentary	We argue for viewing resilience as a multifaceted and multilevel construct. Without abandoning psychology’s strong individual-level emphasis in conceptualizing resilience, we recommend revisiting the construct to also measure the systems and sources of adversity that give rise to the need for individual resilience. We offer several theories, approaches, and methods that can aid resilience researchers in adopting this broader use of the resilience construct.
Specific theoretical steps to be taken by resilience researchers	Resilience researchers should consider an individual’s social ecology in their approach. There are a wide range of theories from diverse disciplines that could provide one or more models for simultaneous or complementary examination of meaningful constructs at the individual, relational, community, and system levels. Some involve <i>conceptualizing</i> resilience in the context of an ecological framework (e.g., Bronfenbrenner). Others involve <i>mechanisms</i> by which different systems have influence and are self-sustaining (e.g., Kelly’s ecological metaphor).
Implement research designs, approaches, and analytics that align with a more ecological orientation	Resilience researchers should expand their methodological and analytic toolboxes to support the examination of constructs operating at and between multiple social-ecological levels: <ul style="list-style-type: none"> • <i>Community-based participatory research (CBPR)</i> necessitates we move beyond individual-level constructs. CBPR grounds researchers in the communities with which they partner, facilitating explicit attention to systems. • <i>Social network analysis</i> will help us move beyond asking, “What about an individual makes him or her resilient?” to also ask, “What about this person’s network/system location or characteristics predict her or his resilience?” • <i>Multilevel modeling</i> expands the types of research questions we are able to ask concerning resilience by (a) allowing for variables at multiple levels of analysis to be modeled simultaneously, (b) accounting for dependency associated with shared group membership, and (c) assessing interactions between multiple social-ecological levels.
Conclusion	Through a new commitment to multiplicity in theory, approaches, and methods, researchers can help to tell the rest of the story on resilience and better equip individuals and whole communities for success.

ularly in understanding the human mind, its functions, and its behaviors. Accordingly, the majority of resilience research in psychology has focused on resilience as an individual-level phenomenon. Although terms such as *community resilience* that recognize the impact of sociocultural ecology on access to resources have emerged (Kirmayer, Dandeneau, Marshall, Phillips, & Williamson, 2011; Ungar, 2011), the focus is still primarily on understanding what was once referred to as “ordinary magic”—the individual’s ability to overcome social circumstance and traumatic life events (Masten, 2001).

From these lines of reasoning, resilience is conceptualized as a process within the individual, isolated from the systems in which the individual is embedded that have shaped his or her experiences, history, and opportunities from birth. For example, prior research has examined the ability of a child raised in a family with low socioeconomic status to remain healthy across his or her life course (Miller et al., 2011), the ability of people living with HIV to overcome stigma and reduce resulting stress and HIV symptoms (Earnshaw, Lang, Lippitt, Jin, & Chaudoir, 2015), or the ability of low-income, urban Black men to overcome racism, incarceration, and unemployment (Teti et al., 2012). This research points to factors such as a person’s perseverance, commitment to learning from hardship, or ability to reflect and refocus to address difficulties as keys to resilience (Teti et al., 2012). Even when research points to factors outside a given individual, such as his or her mother’s nurturance (Miller et al., 2011) or social support (Earnshaw et al., 2015), the construct is still defined as something that each individual may or may not possess. The individual remains our unit of analysis as researchers strive to understand and delineate what enables this individual to overcome hardship and succeed—to be resilient—while his or her peers experience a set of adverse outcomes.

This stands in contrast to the level at which the initial adversity—the specific social circumstance or traumatic life event to be overcome—is engendered. In reviewing the resilience literature, it becomes evident that adversity is related to one’s social location, as terms like *low socioeconomic status*, *stigma*, *low-income*, *urban*, and *Black* are frequently used to describe the population of interest or, *at risk* (e.g., see Earnshaw et al., 2015; Miller et al., 2011; Teti et al., 2012). Social location, in this case, refers to the groups to which people belong based on their position in history and society—their place in established systems. Even when adversity refers to an acute traumatic event, such as crime victimization, the sudden death of a child, or a car accident, one’s ability to gain access to necessary resources posttrauma is affected directly by his or her social location. As such, resilience researchers might largely investigate how people overcome their social location in a system: their low income, their stigmatized identity, their Black-ness.

What is wrong with resilience, therefore, is our tendency to reduce it to something within the individual—hardiness or intelligence—while the source of the adversity that warrants resilience—social location—operates at a systemic level and often outside the scope of assessment. In other words, the problem and proposed solution are misaligned. The ability of an *individual* “low-income, urban Black” man to persevere and draw support from spirituality will not necessarily enable him to overcome *systemic* processes, such as classism and racism, which sustain the mass incarceration and reduced employment of young Black men (see Teti et al., 2012). For example, if we were to look at labor

practices during the Industrial Revolution in the first half of the 19th century in Liverpool, England, where the average life expectancy was only 26 years (Haley, 1978), we might say if we only could engender more resilience in our young people, we could begin to address such a significant public health problem. We might even hold up a 40+-year-old worker as a model to be emulated for his fortitude and zest for living. However, this would be ignoring the working, housing, and sanitation conditions that were disregarded in overcrowded urban areas at that time.

The tendency to approach systems-level problems with individual-level solutions, to teach people *at risk* that the only impediment to overcoming their own adversity is their limited sociability, dedication, or commitment, sets them up for additional failure. It can even inadvertently reinforce the problematic systems. For example, by maintaining a heavy focus on the individual, researchers, practitioners, and policy makers miss the systemic causes of the problem and forgo the ability to develop effective solutions (commonly referred to as “blaming the victim”; see Pharr, 1997; Ryan, 1976). Furthermore, when a given individual is resilient, rising above his or her adversity (i.e., social location), that achievement can be used as a source of “false hope” for those left behind (Pharr, 1997, p. 62). Thus, the individuals’ resilience is woven into a narrative to persuade others to believe they too could overcome adversity if they only worked harder (commonly referred to as “tokenism”; see Pharr, 1997). Finally, when an individual is not successful in beating the odds, his or her failure can reinforce the structural and intrapsychic message that he or she truly is just “not good enough” (commonly referred to as “internalized oppression” or “distortion,” see Johns, 2008; Pharr, 1997). As a result, the very social circumstances that resilience is supposed to aid in overcoming persist unchallenged, and the broader systems that reinforce these social hierarchies and inequalities remain intact. Meanwhile, individuals are left to feel responsible for something beyond their control and may begin to believe that things like their Black-ness are the cause of their failure instead of broader systems and the underlying processes supporting such systems (see Hamby, 2015, p. 3, for a discussion of race as a cause vs. race as a marker).

When presented with the potential hazardous consequences of current resilience research in the field of psychology, it could be easy to argue that the concept of resilience has lost its value. This is not, however, the course of action we advocate for here. Returning to the notion that resilience is multidisciplinary, multifaceted, and multilevel in nature, it is clear that resilience research in the field of psychology can and should be revisited and revised to measure the very systems and sources of adversity that we hope to see community members overcome. It becomes a *both/and*—we should study *both* why the 40+-year-old English worker has been able to thrive in such deplorable conditions in Liverpool in the 1800s *and* the harsh conditions in which this worker is surviving.

Reconstructing Resilience Research

We are not the first to suggest that resilience research be multifaceted and multilevel in nature. This construct is examined across a wide range of disciplines, some providing more equal footing in the assessment of variables at multiple levels of analysis compared to others. Researchers and scholars in fields such as community, developmental psychology, social work, public

health, and sociology have discussed the necessity of examining systems as a key to understanding any particular phenomenon for quite some time (e.g., see Bronfenbrenner, 1979; Davis, 2014; Kelly, 1968; Ryan, 1976). Furthermore, the “fourth wave” of resilience research has been characterized by its focus on multi-level analysis, among other foci (Masten, 2007). The increasingly ecological orientation toward resilience research in the field of psychology is quite promising. To continue this trajectory, we must be equipped with theories that allow for the simultaneous or complementary examination of *both* individual-level variables *and* systems-level components that engender adversity or promote wellness. We also need methodological approaches and analytics that align with our theoretical underpinnings and are able to handle these complex relationships. Here, we review several theories, approaches, and methods to meet the needs of the reconstructed multilevel, multifaceted resilience research.

Reconstructing the Construct: Incorporating Systems Theories

It is one thing to state that resilience is a multifaceted and multilevel construct; it is another endeavor to translate this conceptualization of resilience into research questions that probe these many different facets and levels. Fortunately, many theories exist to help facilitate this transition and to reconstruct resilience in a multilevel framework, allowing for pointed research questions that target multiple levels of analysis. Some theories provide scaffolding to help *reconceptualize* resilience as an ecological construct. For example, Bronfenbrenner’s (1979) ecological systems theory presents the individual as living in a series of nested social systems, frequently visualized as a sequence of concentric circles. The individual exists in many *microsystems*—patterns of activities, roles, and interpersonal relations experienced in a given setting, such as school or family—that interact in the *mesosystem*—interrelations among two or more settings, such as the family-school mesosystem. The microsystems and mesosystem are enveloped by the *exosystem*—one or more settings in which the individual does not have an active role but in which events occur that affect or are affected by the individual; this could include the impact of parents’ social networks on their children. All of these systems, then, are encircled by the *macrosystem*—overarching patterns of a culture or subculture, belief system, or ideology, such as the American value of individualism (see Spence, 1985).

Although Bronfenbrenner was a developmental psychologist, this model is truly transdisciplinary as it has been adopted by many other fields as a foundational framework for interacting with a wide range of phenomena of interest. The fields of community psychology and social work routinely teach Bronfenbrenner’s (1979) ecological model in their undergraduate and graduate training programs. The theory has even helped to transform the field of public health to think more ecologically, influencing the development of several integrative theories of health behavior such as the social action theory, the theory of triadic influence, and the structural model of behavior (see Crosby, Salazar, & DiClemente, 2011). Bronfenbrenner’s ecological systems theory provides a starting point for resilience researchers just beginning their conversation on systems or those wanting to identify a framework to guide their empirical investigations.

Other theories advance this conversation by going beyond *conceptualizing* constructs, such as resilience, in a multilevel model inclusive of multiple systems, to attending to the *mechanisms* by which these different systems are self-sustaining and have their influence. For example, Kelly’s (1968) ecological metaphor was influenced by field biology, in which an entire biological community or ecosystem is the unit of study. Kelly, a community psychologist, argued that the same concepts examined in a biological ecosystem could be used to understand human settings and communities. According to the ecological metaphor, it is necessary to attend to four key principles to understand and intervene on a particular phenomenon in a given setting: *adaptation* concerns how individuals cope with the demands and constraints of a particular environment or system and how the environment adapts to its members; *cycling of resources* refers to how resources are defined, used, created, conserved, and transformed in a given setting or system; *interdependence* highlights how all elements of a given system affect and are affected by one another—a change in one will cause change in others; and *succession* recognizes that systems are not static but rather are in a constant state of flux that requires taking a contextual and historical approach to every system or setting. In Kelly’s theory, adaptation, cycling of resources, interdependence, and succession are the mechanisms through which any system is influenced by and has its influence on its members. Researchers may find Kelly’s ecological metaphor to be a useful tool for understanding how resilience is an expression of and response to a specific ecological context. (See Chan, Hollingsworth, Espelage, & Mitchell, 2016, for application of this theory in interventions.)

Theories that identify the mechanisms by which systems affect individuals continue to develop within and beyond the field of psychology. McLean and Syed (in preparation) use a narrative approach to conceive of systems as defined by a *master narrative*—culturally shared stories that tell us about a given culture and provide guidance for how to be a “good” member of a culture—and linking it to individuals’ *personal narratives*. By using the same metric—narratives—to measure system- and individual-level constructs, they can more accurately assess the relation between the two. Beyond psychology, in fields like sociology, theories such as social dominance theory (Sidanius & Pratto, 2001) or social identity theory (Tajfel, 1982) can be used to examine the mechanisms by which individuals’ social group memberships affect their behavior and capacity for resilience. Precisely what field or tradition resilience researchers draw from to begin thinking about systems is not important. Indeed, systems thinking is much like the construct of resilience in that they are both multidisciplinary and interdisciplinary in nature. It is important for researchers to take the first step in reconstructing resilience research by incorporating systems theories into their work.

Reconstructing the Research: Selecting Appropriate Approaches, Methods, and Analytics

Thinking systemically is a first step in providing equal footing to systems-level components and individual-level variables in resilience research. However, our theoretical orientation gains its value in our ability to translate it into our research designs and analytic approaches. Can we attend to systems-level inequities without acknowledging our own privilege and power in relation to

the communities in which we conduct research? Are we incorporating systems into our research if all of our constructs are measured at the individual level? If we conceptualize constructs operating at the systems level, such as size of a community, how do we incorporate this into our analysis?

The tendency to reduce resilience to an individual-level phenomenon is likely due in part to limitations regarding research design, methods, measures, and analytics; these limitations are twofold. First, we likely do not yet have the perfect method, metric, or analytic approach for all possible research questions; for example, it would be extraordinarily difficult to collect data or even model resilience predictors across five social-ecological levels with cross-level interactions (Centers for Disease Control and Prevention, 2013). However, it is feasible to assess and test specific multilevel research questions informed by these theoretical perspectives. Second, many researchers are simply unaware or feel uncomfortable with specific approaches or advanced methods and analytics.

To overcome these limitations, we must expand our methodological toolboxes to include approaches and analyses that are suited for multilevel and systems-oriented investigations and that better align with an ecological orientation. Here, we provide a brief introduction to several diverse approaches and advanced methods that may be particularly useful as resilience research becomes more ecological: community-based participatory research, social network analysis, and multilevel modeling. To illustrate that these approaches and methods can be applied readily to resilience research, we provide examples from the literature for each one. Of course, this is only an introduction, and researchers should take care to learn and understand the nuanced manipulations that extend already understood techniques into these alternate and more advanced approaches.

Community-Based Participatory Research

The first approach we highlight here is community-based participatory research (CBPR; see Reason & Bradbury, 2008). Like the construct of resilience, CBPR is a multidisciplinary endeavor. Many different fields use this approach, and they often use different terminology to define their work; for example, what some call CBPR, others refer to as participatory action research (PAR) or just action research (AR). PAR is sometimes considered to be a category of approaches, one of which is CBPR. To further complicate the conversation, there are intradiscipline and interdiscipline discrepancies in what qualifies as CBPR, PAR, or AR. Some traditions require that community members are involved in every research decision, from the identification of a research question through analysis, interpretation, and utilization of the findings (see Yuan et al., 2016). Other traditions only require that community partners participate in some point of the research process; for example, they provide data and information via qualitative interviews. We recognize that the variation in terminology and practice across traditions can be overwhelming as researchers try to determine exactly how to implement this approach. However, the different traditions in CBPR/PAR/AR are united by several defining features.

In reviewing the literature on CBPR/PAR/AR, five key elements emerge. First, this approach is *participatory* in that the individuals being studied are active participants in the research; they may be

involved in all aspects of the research, sharing in decision making with the researcher, or may only participate in specific parts of the research process. CBPR/PAR/AR is committed to a *colearning environment with multiple ways of knowing*. Researchers and community members contribute to and learn from one another, as local knowledge is valued and stands side-by-side with researchers' "expertise." This approach to conducting research relies on a *reflective process* in which there is a commitment to developing critical consciousness related to systems and structures, as well as an explicit focus on resulting power and empowerment. CBPR/PAR/AR also implements a *practical and enabling process*, such that research should have a practical purpose and facilitate participants' learning, development, and growth. Finally, CBPR/PAR/AR is defined by a *commitment to action* in that the purpose of research is to incite change and, many times, political change.

In implementing research that is participatory, supportive of a colearning environment with multiple ways of knowing, reflective, practical and enabling, and committed to action, researchers will find it challenging, if not impossible, to examine any phenomenon as only an individual-level construct; this approach grounds researchers in the communities with which they partner, facilitating explicit attention to systems. We recommend that resilience researchers begin or continue to implement these key values into their work. For example, Shetgiri et al. (2009) used CBPR to examine resilience among Latino young people living in low-income households, as these individuals have been identified to have a higher likelihood of poor educational and health outcomes compared to their peers. As opposed to developing a definition of resilience a priori, researchers partnered with community members to understand how they perceived this construct. Through interviews, researchers found that parents of Latino youth believed success resulted from the individual child's desire to succeed, bolstered by family support. This was in contrast to the young people; they recognized the benefits of interacting with and accepting help from the broader community. Had Shetgiri et al. (2009) implemented a different approach to their research that did not value a colearning environment; they likely would not have learned about parents' resistance to community-based programming for youth development, and any resulting intervention may have been largely unsuccessful. In using CBPR, the researchers learned the importance of looking beyond the individual young person to engage the broader system—in this case, via parent-focused programming. In this issue, Schultz et al. (2016) discuss in depth the importance of community-informed efforts and community connectedness in intervention design, implementation, and evaluation. Yuan et al. (2016) also discuss some of the systems-level barriers and potential solutions to conducting this work.

Social Network Analysis

CBPR/PAR/AR is not a method; it is always defined as an approach or orientation (Reason & Bradbury, 2008). Social network analysis, conversely, refers to both a specific method and a theoretical approach. Social network analysis is based on two premises. The first is the idea that individuals are linked to one another in thick webs of social relations and interactions; these links can be based on similarities (e.g., same gender, members of the same club), social relations (e.g., collaborator, employer, supervisor), interactions (e.g., seeks advice from), or flow (e.g.,

information, resources, beliefs). The second is that the structure of the webs matters (Borgatti, Mehra, Brass, & Labianca, 2009). Social network analysis, then, maps out these webs and can be used to answer a variety of research questions that examine the consequences of the existing networks and how an individual's location in the network (or that of an organization, city, etc.) determines that individual's opportunities and outcomes. Social network analysis, undergirded by social network theory (see Borgatti et al., 2009), relies on and maps systems. In doing so, research questions are transformed from the individual level of analysis to the systems level. Instead of asking what about *this child* makes him or her resilient, social network analysis prompts us to ask, "What about this child's location in his or her *network/system* predicts resilience?" Individuals are represented in the network as nodes. Although each node can possess specific characteristics, such as race, age, or education level (i.e., attributes), the focus is on the ties (i.e., connections) between the nodes and how the structure of the ties affects outcomes of interest.

Although social network analysis lends itself well to resilience research, few resilience researchers have used it to examine the influence of an individual's location in his or her social network on resilience. Fortunately, social network analysis can model social networks of not only individuals but also households, organizations, communities, and cities, ever increasing its utility for multilevel research. Cassidy and Barnes (2012) examined the social networks of households in a poor, marginal, rural community in Botswana to examine if and how a household's connectivity predicted resilience following human illness and death, crop damage, and livestock disease. They found that households that were "more socially networked" (i.e., greater degree centrality in that the node is connected to a greater number of nodes and greater betweenness in that the node is part of the shortest path between other pairs of nodes) had a wider range of livelihood strategies and greater capital to overcome adversity; they were more resilient.

Multilevel Modeling

To close our section on approaches and methods that can aid resilience researchers in becoming more ecological, we highlight one specific analytic approach: multilevel modeling. Multilevel modeling is based in regression, a familiar approach for most social scientists. Multilevel modeling is particularly useful for nested research designs in which individuals are *nested within* different groups or contexts, such as individuals nested within different communities within a large urban area. The underlying assumption of multilevel modeling is that individuals nested within the same group could be more similar to one another on an outcome variable of interest compared to individuals across groups. That is, individuals who live in the same community would have more similar experiences with violence, for example, than individuals across different communities. In reconstructing resilience as a multilevel construct, multilevel modeling may prove particularly useful as it allows for variables at multiple levels of analysis to be included in the same model, and it accounts for dependence associated with shared group membership (see Bickel, 2007; Raudenbush & Bryk, 2002). Analysts could model individuals, nested within communities, nested within cities. Researchers could then describe the influence of these different factors on an individual-level outcome, like resilience, partitioning out the in-

fluence of and understanding the intersection among individual-, community-, and systems-level constructs.

Bell, Romano, and Flynn (2013) used multilevel modeling to examine behavioral resilience among 5- to 9-year-olds living in out-of-home care in Ontario, Canada. In their data set, individual children were nested within foster families, which were nested within child welfare workers' caseloads, which were nested within child welfare agencies. Accordingly, Bell and colleagues assessed the contribution of factors at each of these four levels of analysis on conduct problems, emotional problems, prosocial behavior, peer relationships, and academic performance. Although the highest proportion of total explained variance in behavioral resilience was explained by individual-level variables, family-, child welfare worker-, and child welfare agency-level variables also predicted behavioral outcomes. With this approach, the researchers were able to identify how systems in which an individual child is embedded affect his or her well-being, emphasizing the importance of engaging in multifaceted, multilevel resilience research. It is important to note, however, that one key challenge with multilevel models is the sample size requirements (Raudenbush & Liu, 2000). When individuals are nested within groups, guidelines recommend a minimum of 30 units at each level of analysis (Hox, 1998; Kreft, 1996; Maas & Hox, 2004, 2005). Resilience researchers should keep in mind that it may be difficult to secure many cases at the larger aggregated level (e.g., schools), thus limiting the statistical power of the analyses.

Although CBPR, social network analysis, and multilevel modeling are showcased here, the specific approach, method, and analytic plan used in a particular study should be selected based on its ability to provide an accurate and comprehensive answer to the specific research questions. Furthermore, "analytic techniques can also expand the types of research questions we are able to ask" (Shaw & Janulis, 2015, p. 17), so it is essential that resilience researchers continue to expand their methodological and analytic toolboxes. The good news is that a substantial literature has emerged in implementing these varied approaches and in conducting advanced analytics (e.g., see Muthén & Muthén, 2013, for an example of advanced analytical software).

Conclusion

To improve outcomes for individual participants and communities, resilience researchers must become more ecological in their approach. From the outset, researchers should familiarize themselves with a wide range of theories from diverse disciplines to select guiding models that fit their construct of interest and allow for the assessment of meaningful constructs at individual, relational, and community levels. Researchers should also become versed in and utilize a wide range of approaches and methods (e.g., CBPR, social network analysis, multilevel modeling) that support the examination and measurement of constructs operating at and between multiple levels. Through this new commitment to multiplicity in theory, approaches, and methods, researchers can help to tell the rest of the story on resilience and better equip individuals and whole communities for success.

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