CHAPTER 1

Why a New Direction Is Necessary

Developmental Psychology in the Lives of Children Classified as "At Risk"

Today's developmental psychologists are continuing the tradition begun with the child study movement of using science to better the lives of society's most vulnerable children and families (e.g., Lee et al., 2022; McTavish et al., 2022; Reynolds, 2021). In today's context, those most in need are the children who are subject to the deleterious effects of "cumulative risk" (CR; Burlaka et al., 2015; Evans et al., 2013). The concept of CR was introduced to developmental psychology in 1978 by Rutter (1978). This enabled a new way of classifying children according to how poverty and other adverse experiences of their birth and later years predicted long-term negative outcomes throughout their lifespan. The seminal research on CR shows that each component of social vulnerability that is present at birth (e.g., poverty, single parenthood) increases the likelihood that additional negative environmental factors will affect a child as they continue through development. For example, children born to impoverished parents are more likely to attend overcrowded schools, to witness violence in the home and community, and to be undernourished.

Members of the "at-risk" population have since become research subjects for a vast literature that encompasses much of developmental psychology. While "basic research" in developmental psychology seeks to discover the origins of human capacities and describe universal norms and sequences of skills and abilities as they develop during infancy and childhood, "applied research" is mostly focused on understanding and addressing deficiencies that occur because of suboptimal early experiences. This applied literature can be categorized according to (1) studies that model the effects of broad environmental risk factors such as poverty on equally broad indicators of maladaptive functioning during childhood and

(2) studies that focus on more proximal relationships, including how deficits in one developmental domain affect other domains.

The first research track contrasts various statistical models of how multiple risk factors intersect using the concept of CR. Outcome variables include acute developmental damage such as failure to thrive and the standard assessments of child maladaptive functioning developed by Achenbach (1966). These child behavior checklists (CBCLs) provide an overview of internalizing and externalizing psychological and developmental pathology during childhood. Such studies mirror medical research on the adverse effects of various conditions, treating factors such as poverty and violence as environmental "toxins," with problematic behavior and delayed development as the symptoms. Some interventions aimed at reducing poverty and child maltreatment reference this literature and use similar outcome variables.

The second line of research provides a more fine-grained analysis of how specific aspects of parenting, the home environment, and school-based interventions impact areas of cognitive, social, and language development among the "at-risk" child population. This literature has been largely centered on early childhood. Rather than what could be seen as the "medical model" of the CR literature, the early childhood-focused research provides what could be considered a psychological model. Accordingly there is a bidirectional relationship implied between innate characteristics of individual children and the impacts of various risks on their development. This allows researchers to test for individual differences among children experiencing similar environmental risk factors. The CR literature takes as a given that harmful conditions have detrimental effects on children's well-being and aims to provide accurate models that depict this unidirectional relationship with precision for the purpose of targeting social interventions. By contrast, the "psychological model" examines individual differences among the at-risk population to identify protective factors that enable resilience and even resistance to the negative effects of adversity.

While many studies in basic developmental science are focused on the cognitive domain – addressing questions like whether humans are innately wired to understand mathematical concepts, for example – the applied research is heavily focused on the social domain. "Social competence" is listed as a key outcome in most studies of children who are at risk. The foundational assumption guiding applied developmental psychology is that children placed at risk tend to develop deficiencies in multiple domains of functioning over time (e.g., Atkinson et al., 2015). The results from studies showing how risk factors affect early childhood development

set the groundwork for research on elementary and adolescent at-risk populations. Therefore, negative effects early in development are added into models of longer-term impacts demonstrating unique and cumulative effects of adverse early experiences on later childhood, adolescence, and adulthood (Evans et al., 2013).

The early childhood studies that focused on children aged two to five years departed from examining specific environmental effects on children and instead used children's behaviors, capacities, and skills as both explanatory and outcome variables. For example, rather than studying the effects of low family income and living in a neighborhood with high crime statistics on children's self-regulation, the early childhood literature would examine the effects of children placed at risk's own self-regulation skills on their school readiness. While the CR literature has social policy implications, including for interventions, much of the psychological early childhood literature seems to suggest that the key to improving child outcomes is to target specific areas of children's skills for improvement, with the expectation that this will in turn improve related areas of child functioning (e.g., Bulotsky-Sheerer et al., 2020; McDermott et al., 2022).

Conceptualizing Risk

The shorthand "at risk" has been widely applied to children at all stages of development and in a variety of contexts. The latest iteration refers to children "placed at risk" to signify that the risk is not a characteristic of the child themselves but rather a circumstance that affects them. Despite this rhetorical intention, the idea that individual children may be differentially impacted by the same risk factors suggests that they do contribute in varied ways to their own developmental responses to adverse experiences.

The framing and results of much research designed to understand the deleterious effects of "at-risk" status on children have led to a host of findings highlighting such children's developmental deficiencies in every domain. These include significant underdevelopment and/or delayed development of language, theory of mind, IQ, self-regulation, and executive functioning (Atkinson et al., 2015; Chang et al., 2012; Fernald et al., 2013; Finegood & Blair, 2020; Gilkerson et al., 2017; Gobeil-Bourdeau et al., 2022; Mistry et al., 2010). The culprits in these developmental disadvantages range from global factors like home environments to more micro-elements like the number of words spoken at home during the child's first years and the nature of parent–child interactions.

Missing from most research on children and risk is any critical evaluation of the methods and measures used to define either the explanatory variables – how risk factors are defined – or the outcome variables that measure aspects of children's development. Three nationwide US data collection clearinghouses have created a battery of assessments that serve as the standard for the field. These include the Head Start Family and Child Experiences Survey (FACES) and the Early Childhood Longitudinal Survey – Birth to Kindergarten (ECLS-B) and Kindergarten to 5th Grade (ECLS-K). Funded by the American federal government, these data collection initiatives conduct measures of national cohorts of children to enable research with both cross-sectional and longitudinal designs. The batteries of tests cover every developmental domain as well as assessing the contexts of children's lives and classrooms. Each dataset includes measures of basic cognition such as executive functioning along with school-based learning such as preliteracy and prenumeracy (FACES) or knowledge of the curriculum up to the 5th grade (ECLS-K). The dataset also includes measures of social and emotional development, specifically social skills and problem behaviors. There is extensive overlap between the CR, FACES, and ECLS datasets in terms of the constructs of interest, measures used, and tests of validity/reliability. A large percentage of published research within the field of developmental psychology is composed of secondary analyses drawn directly from these datasets – studies that build on their findings and use the measures and constructs as defined and validated by them. Therefore, the accepted standards for how to assess children's development with the greatest rigor and how both optimal and suboptimal developmental characteristics should be conceived within the field are highly influenced by these data clearinghouse.

Measuring Risk and Child Outcomes

Most studies using observations and other innovative methods are conducted with middle-class or mixed-income samples. For example, a recent study by Garner et al. (2021) considered racial congruence and emotion knowledge as variables impacting teacher–child relationships and school readiness. Their sample was composed of middle-class preschoolers from white and African American backgrounds. In this case, the teacher report measure asked teachers about their relationships with the children rather than asking them to objectively assess the children's behavior. The school readiness scale used in the study was specifically designed to be strength based, and the measure was triangulated by assistant teachers to increase

the validity and limit the inherent bias associated with using a single rater. Finally, the construct of emotion knowledge was assessed via an emotion knowledge performance task conducted by the researchers. This study of preschoolers from middle-class backgrounds included measures and procedures designed to minimize bias. In addition, by including the impacts of teacher–child relationships and racial congruence, the study acknowledged the inherent influence of teachers' own potentially biased perceptions of children on their assessments of them.

Studies focusing specifically on the development of poor children are much more likely to make use of the standard assessments used in the national datasets than studies of middle-class children. Furthermore, uncritical use of teacher reports to determine children's deficiencies is common in studies in which the entire sample is composed of children from low-income families (Mason et al., 2014). A few studies of poor children do apply innovative methods developed specifically for the purpose of challenging assumptions. These studies may tease apart the nuances of what constitutes an adverse experience or an environmental risk factor; for example, involvement with children's protective services (CPS), maternal education level, and family income are often used as proxies for child neglect and maltreatment and impoverished home environments. However, involvement with CPS is not always an accurate indicator of neglect or maltreatment but might be rather an indicator of racial bias or other negative experiences (such as retaliation by relatives; Bostock & Koprowska, 2022; McTavish et al., 2022). Bostock and Koprowska (2022) analyzed transcripts of interactions between CPS workers and families that revealed racial bias and demonstrated how institutions such as schools and child welfare agencies used their privilege to assign and define risk in a way that did not match family experiences or perceptions.

Therefore, while risk factors associated with poverty and racial minority status have the potential to create adverse experiences for children and families, these might not occur through the same mechanism as child abuse or neglect by parents (McTavish et al., 2022). Similarly, neither poverty nor maternal education level alone explains negative child outcomes. Rather, associated factors such as stress and children's own traits such as temperament mediate the parent–child relationship (Chang et al., 2012; Gobeil-Bourdeau et al., 2022; Hill & Palacio, 2021; Mistry et al., 2010; Seay & Kohl, 2015; Washington et al., 2020). A scoping review found that household chaos as assessed primarily by parent report had a greater negative impact on child outcomes than a host of other risk factors, including poverty (Marsh et al., 2020).

Many studies have found differences between racial and ethnic groups in the ways environmental risk along with parent's stress, behaviors, and beliefs impact child outcomes (Cappa et al., 2011; Hyun et al., 2021; Knauer et al., 2019; Washington et al., 2020). For example, a study by Knauer et al. (2019) demonstrated that among low-income Mexican families parental warmth and nurturing during infancy predicted positive outcomes during preschool age, whereas parental "stimulation" did not. This study used the Home Observation for Measurement of the Environment (HOME) inventory, which assesses both parental responsiveness and emotional support along with North American middle-class ideals of an intellectually stimulating environment. Parenting behaviors that signified intellectual engagement during preschool age did relate to concurrent measures of child cognitive development, whereas items assessing educational materials in the home showed no such relationship. This is only one study among many that suggests that there are multifaceted, multidirectional influences between parenting behaviors, home environment, and specific child outcomes among families living in poverty and from different cultural backgrounds.

Defining and Measuring Poor Children's Development

Nonetheless, when taken on aggregate, the risk factors related to poverty are more likely than not to lead to negative child outcomes. Although the CR literature generally models population trends, the early childhood literature uses the FACES and ECLS constructs to parse how the same risk factors differentially affect individual children. However, the measures and study designs do not allow for consideration of how global risk factors might be differentially construed and experienced by individual families. By conceptualizing all risk as universally experienced, individual differences in children exposed to the same risk factors can only be explained by differences in child characteristics. The implication is that there is something special about the children who experience fewer negative effects rather than the reality that there are always multifaceted and multidirectional impacts of any common experience on children (e.g., Gobeil-Bourdeau et al., 2022). It is likely that large numbers of children living in poverty are protected by the unique characteristics of their families and immediate communities (e.g., Barajas-Gonzalez et al., 2022). Indeed, resilience considered as a group response to collective hardship and trauma has been demonstrated in various cultures (Chua et al., 2019; Diaz-Loving,

2005; Ebersöhn, 2019), yet communal forms of resilience are not considered in the at-risk literature.

The outcome variables used within the CR literature have been subjected to extensive psychometric testing and widespread use in varied fields, including child psychiatry. The CBCLs are the most common outcome measures. They indicate a wide array of behavioral symptoms categorized as either externalizing or internalizing pathologies that are assessed from early childhood through adolescence. However, some research has questioned the cross-cultural validity of these measures (Liu et al., 2011). In addition, the checklists are almost always completed by the child's primary caregiver and/or teacher rather than a clinician. There is rarely any observational protocol or data triangulation included in such studies to account for the potential biases of these secondhand raters. Nonetheless, given that the CBCLs assess the presence of extreme and developmentally atypical behavior, their convergent validity with other measures of pathology does support their general validity for determining population trends. However, their predictive and concurrent validity for psychopathology among preschoolers has been challenged (de la Osa et al., 2016).

The psychological early childhood literature, on the other hand, makes use of more fine-grained assessments of both explanatory and outcome variables. These include the quality of educational materials in the home, parenting styles, and the way in which adults speak to and around children. In doing so, this literature aims to delineate the mechanisms by which poverty affects children. However, by focusing on parenting behaviors it also shifts the blame from the structural issue of poverty (as defined in the CR literature) to the behaviors of individuals living in poverty. The measures used to assess such individual characteristics have been both widely lauded and critiqued. For example, the HOME inventory (Bradley & Caldwell, 1979) became such a standard proxy for the "quality" of poor children's home environments that it was used in virtually every study of early childhood development involving poor children in the decades following its development. However, cultural differences have been found in the meanings of the measure's items (Holding et al., 2011; Jones et al., 2017).

Similarly, the language deprivation found among children living in poverty permeated political discourse and spurred national movements for improving young children's early language exposure, such as home-visiting programs and curriculums targeting vocabulary at early learning centers (Fernald et al., 2013). This research has since been critiqued along

similar lines to that leveled at the HOME survey (Sperry et al., 2019; Sugland et al., 1995).

Critiques of culturally biased methods for assessing the quality of poor maternal parenting exist, yet results from these measures are widely cited as justification for additional research designs that build upon them. The findings of research based on potentially biased measurement tools can create inaccurate assumptions within academia as well as unhelpful public policy and interventions.

While the explanatory variables described above are subject to questions regarding their validity, it is the conceptualization and measurement of the outcome variables used to assess poor children's development that are most prone to criticism. Within the cognitive domain these measures include IQ (most commonly assessed using the Peabody Picture Vocabulary Test), executive functioning (assessed using self-regulation, impulse, and attention control tasks), and theory of mind. Assessment of each of these constructs involves a procedure in which a researcher sits with a child apart from their classroom and administers a performance task. This procedure ignores the potential psychological impact on a three-, four-, or five-year-old of being separated from their classroom by a stranger and asked to complete something that requires focus and attention. The likelihood that the stress of such a "strange situation" (Ainsworth et al., 1970) might impact children's task performance is high given that stress has been shown to affect the cognitive performance of children as young as three (Ding et al., 2014; Zelazo & Lyons, 2012). The fact that these procedures do not include a measure of the child's affective state at the time of task completion raises concerns regarding their measurement validity. Nonetheless, these cognitive assessments have the benefit of allowing for direct observation of children's behavior.

Within the social/emotional domains, such measures are administered in a far less objective way. They often do not include any direct observation of child behavior and instead rely entirely on the secondhand reports mainly of early childhood teachers, with a smaller percentage of studies surveying parents. Although the race, class, gender, and other biases of teacher report – especially within early childhood classrooms – are well documented (Berg-Nielsen et al., 2012; Mason et al., 2014; Splett et al., 2020; Yates & Marcelo, 2014; Zulauf-McCurdy & Loomis, 2023), these measures persist as the most common means of assessing the social development of poor children. These vast differences in measurement procedures between the cognitive and social/emotional domains imply that

cognition is too complex to assess via secondhand survey report alone, whereas social and emotional development is simple enough that preschool teachers, without any specific training in what constitutes social competence, are qualified to evaluate it among their entire class over the time it takes to complete a survey.

Head Start as Context for Applied Developmental Research

Parallel to the research demonstrating the exponential negative effects of poverty on young children, solutions in the form of social programs designed to ameliorate these effects have propagated. The largest of these is Head Start, an American federally funded preschool program that can begin to serve families through Early Head Start when the child is as young as two years old. Head Start programs thus provide a highly accessible and convenient site for collecting data on young children placed at risk given that all enrolled families live below the poverty line. This setting allows researchers to catalog the nature of various developmental deficits that disproportionately characterize these children and at the same time to test the impacts of specialized programs designed to improve their functioning.

Researchers have examined the impacts of the Head Start program itself, including its curriculum and teacher training, on indicators of child development such as cognitive, language, and social development following program participation. In addition, subprograms instituted within the standard Head Start curriculum have been developed by researchers to address specific areas of need (see Burchinal et al., 2016, for a review).

Within the Head Start literature, many studies forego the performance-based assessments of cognitive function in favor of the vaguely defined "school readiness" construct. These studies often ask teachers to assess children's social behavior in one survey and their "school readiness" behavior in another. Studies that test the relationship between a teacher's perception of a child's social competence and their perception of that same child's school readiness are common. Surveys items seem to suggest that both constructs refer to how well-behaved a child is according to a given teacher. Studies that use the same reporter for both explanatory and outcome variables are not generally considered rigorous or valid within psychological science, yet they comprise much of the research on children attending Head Start programs.

School Readiness

As mentioned earlier, the outcome variable applied most often in Head Start studies is "school readiness." The construct of school readiness reflects a mixture of governmental and Head Start policy along with teacher perceptions of which traits and skills predict long-term school achievement (Robinson & Diamond, 2014). From a cultural perspective, "school readiness" represents the extent to which a child has been socialized into the cultural norms of American schooling by the age of five (Cole, 2013). Although early academic skills have been found to be moderately predictive of later achievement (Rabiner et al., 2016), the Head Start research has focused most extensively on the social behaviors deemed necessary for success in kindergarten. The school readiness construct, with its combination of social, behavioral, and preacademic skills among children placed at risk, has taken precedence as a more precise predictor of school achievement than preliteracy and prenumeracy skills. The notion that self-control, compliance, and conformity to a given authority figure are conceptually equivalent to intellectual capacities for math and literacy learning suggests that "school readiness" may be more about teacher perceptions of poor children than about children's actual developmental skills (Kulkarni & Sullivan, 2022). Indeed, the Head Start studies make clear that what matters for the developmental outcomes of children placed at risk is the extent to which they can integrate seamlessly into American public school kindergarten classrooms (Robinson & Diamond, 2014).

Developmental psychologists have long conducted studies to improve our understanding of the complex factors that comprise social competence such as inhibitory control, emotion regulation, executive functioning, and sociocognitive skills among middle class children. The research defines these observable capacities in terms of the ability to delay gratification, read social and emotional cues, actively control impulsive social behavior, and self-soothe. Neurophysiological data indicate the neurobiological relationship between such behavioral skills and brain development during early childhood (Patrick et al., 2019; Perry et al., 2016). However, when applied to children who attend Head Start programs, these constructs have been redefined in teacher report items as sitting still, paying attention, following directions, and taking turns during classroom routines. The Head Start and high-poverty public school classrooms that serve as research contexts typically score lower on measures of classroom quality than private preschools or more affluent-serving early elementary schools (Fauth et al., 2019; Pianta et al., 2016). The laboratory research on middle-class children has given rise

to complex developmental constructs describing typical development that portray there being that depict a mix of biopsychosocial factors in a constant state of flux during early and middle childhood. Unlike observational and physiological measures of social cognition, social competence measures applied to poor children are defined as simplistic nondevelopmental behaviors, so that teachers with no specialized training can easily recognize and rate them. The consequence of this research aimed at identifying the developmental deficits of children attending Head Start programs is that it shifts these programs' focus from their original emphasis on improving pedagogy for children placed at risk toward improving children's behavior to meet the requirements of kindergarten.

Today's developmental psychologists are exceptionally careful to remove any language from their reports that conveys a "deficit lens" regarding children placed at risk. This includes children living in poverty, those whose families are recent immigrants, and those who are learning English for the first time, as well as those belonging to a historically oppressed racial group. Occasionally, such studies disaggregate race/income/language/immigration status and parent education level. More often, low-income children from diverse racial backgrounds who attend Head Start programs are assessed as a single group and compared with predominantly white middle-class children attending a private or university preschool.

Despite the cautious use of language, the premise of most research on Head Start attendees is that by cataloging the developmental deficits that disproportionately characterize poor children researchers can identify protective factors that support some children for the purpose of cultivating these among all poor children. Accordingly, the social domain – encompassing the ways in which children react to situations behaviorally – has become the focus of much research on both Head Start attendees and children attending high-poverty public elementary schools in the US.

The Social Domain for Children Placed at Risk

The social domain has received extensive attention in Head Start research over the past decade. Originally conceptualized as "social competence" – a mix of peer interaction skills and responses to teachers – a recent reconceptualization termed "affective social competence" (ASC) has been developed to encompass social/interactive, emotional regulation, self-regulation /compliance, and sociocognitive skills (Halberstadt et al., 2001). Researchers argue that this new compilation of skills and traits signifies

a more holistic understanding of young children's behavior that better predicts school readiness than measures that define skills like attention regulation, emotion regulation, and behavioral control separately (Eisenberg, 2001; Halberstadt et al., 2001). Although the original conceptualization of ASC is based on multi-faceted analysis of the ways that emotional knowledge and regulation function during social interactions, the applied version of the construct is often reduced to teacher perceptions of children's agreeability, especially when the population includes children placed at risk (e.g., Creavey et al., 2018; Jones et al., 2015). Indeed, research suggests that teacher reports of ASC are highly influenced by teacher characteristics and teacher–child relationships, and that those relationships are influenced in turn by teacher–child racial congruence (Garner & Mahatmya, 2015).

As developmental psychologists turn their focus to elementary school children, those classified as possessing low levels of ASC and school readiness during preschool are given the increasingly pathological label of Emotional Behavior Disorder (EBD) as they age. Similar to the constructs applied to Head Start attendees, the construct of EBD is not based on psychiatric assessment but rather is defined according to the demands of elementary public school classrooms (Gage et al., 2017). Accordingly, EBD is constituted by disruptive behavior, poor social skills, and poor academic skills. This classification does not exist within the Diagnostic and Statistical Manual of Mental Disorders (DSM) despite the term "disorder" but rather exists solely in the "at-risk" literature. As such, children attending high-poverty elementary schools are assessed for levels of EBD according to classroom-specific indicators such as low levels of on-task behavior and high avoidance of academic tasks. Research suggests that teacher ratings of EBD are impacted by teacher bias, particularly in relation to gender and race (Sheaffer et al., 2021). Despite evidence that elementary schoolteachers' perceptions of individual children are influenced by factors such as classroom composition, teacher characteristics, and the time of the school year when the assessment is completed (Buell et al., 2017; Sutton et al., 2021), teacher reports without controls for any of these variables are the most common assessment tool in research on children placed at risk in elementary school.

This distinction between how basic developmental research is conducted with middle-class children versus the classroom-specific applied research conducted with children placed at risk creates a dual track within developmental psychology. On the one hand, middle-class children are assessed as individuals in laboratories and homes. Measures of these children's functioning are designed to capture subtle differences between and within

individuals. This approach to documenting individual differences leads to the unsurprising findings that contextual differences elicit differential functioning that reflect a unique combination of skills, challenges, and strengths. Alternatively, the measurement of poor children's development is subsumed within the demands of their schooling. Therefore, the well-known "uneven development" of children reflecting intraindividual variation is not accounted for in such studies. Rather, developmental assessment of children placed at risk is reduced to measures of the extent to which they please their teachers. Longitudinal research with children deemed "at risk" predicts increasingly negative lifelong consequences over time. Preschoolers with low ASC and school readiness become elementary children with EBD and adolescents showing antisocial behavior, delinquency, and a host of psychiatric symptoms. Left out of these studies are any measures of the quality of their schools, classrooms, or teachers.

By measuring only individual child behaviors without consideration of the impacts of context or of teacher report bias, the original purpose of studying CR – that social factors beyond children's control have negative effects on their development and therefore public policy must intervene – is no longer the underlying goal of such research. Instead, the focus shifts toward how the characteristics of the children themselves predict their own negative developmental outcomes.

A Circular Argument in Research on the Deficient At-Risk Child

The idea that an individual child's poor social skills "contaminate" all other areas of their development has been described as producing "spillover effects." This is the rationale for why research on poor children's social and emotional development includes behaviors such as "paying attention" that are generally considered within the cognitive domain, and why EBD – a measure of "emotional behavior" – includes items asking teachers about children's academic skills and attitudes toward classwork. Given that N. American teachers within the same school system generally reflect a similar set of values, cultural biases, and expectations regarding children's behavior, it is not surprising that teachers' assessments reflect a consistent perspective across separate developmental domains and even across multiple grade levels.

Therefore, rather than reporting on the development of children placed at risk, studies employing teacher report as the sole or primary measure demonstrate that this population of children is considered deficient in

multiple areas by their teachers. As they move through different developmental stages and grade levels, the negative perceptions that their teachers hold of them, combined with various adverse experiences likely produce adolescents and adults who do exhibit pathological or substandard psychological functioning. However, these early measures provide no actionable insights for policymakers or practitioners because they do not present a nuanced or meaningful picture of such children's development. Instead, they simply document how teacher bias disproportionately affects children placed at risk.

Research on middle-class children's social development often considers their social skills within the context of social interactions (either using sociometric analysis or in conjunction with observations of peer interactions). On the other hand, the social skills of children placed at risk are often defined by survey items that ask teachers to report on general propensities without giving regard to any specific social interaction or context. Accordingly, a child who is rated as aggressive is assumed to behave aggressively regardless of the social situation in which they are engaged. This methodology locates social behavior discretely within the individual child. In such studies, the environmental factors that form the basis for the original designation of at-risk status (e.g., poverty, violence) are not investigated regarding their mechanisms of impact. The focus on how children placed at risk's behavior itself leads to their negative outcomes renders the term "at risk" merely a rhetorical device while the methods and results paint a picture of children who are inherently flawed.

The optimal and deficient social development of children placed at risk is defined according to behavioral expectations of N. American classrooms. This occurs despite the reality that, especially for children placed at risk, American classrooms may be experienced as hostile due to cultural mismatches and biases (Delpit, 2006, 2012). This way of defining developmental traits according to a highly culturally and institutionally specific social context – a classroom in a N. American school – serves to reify the social development of at-risk children as a specific type that exists solely within the cultural context of N. American schooling.

Problems with Validity and Reliability in Studies of Poor Children

Whether the focus is on school readiness, social competence, or EBD, the methods used to define the constructs create a closed feedback loop in which a narrow sociocultural perspective is used to define competence. Much like how children's risk is multiplied by each additional unfortunate

life experience, their perceived deficits are compounded by each new measurement that builds upon prior overly narrow or biased measures.

Broad critiques of "developmental psychology" have centered on the absurdity of studying the human condition using methods from the natural sciences (Burman, 2017; Morss, 2024). Isolating discrete components of behavior like cells in a petri dish runs counter to holistic and systemic views of development (Burman, 2017; Morss, 2024). The notion that the human organism is infinitely complex considers behaviors, relationships, the physical environment, and many other factors to be functioning in a web of interconnected contingent responses. Using the example of motor development, dynamic systems theory has long demonstrated how something as apparently simple as a toddler navigating new terrain involves multiple series of contingent feedback loops. Thelen and Smith, (2006) describe how and communication between multimodal systems of the child's biology function in concert with the many factors present in their physical and relational context (Thelen & Smith, 2006).

Rather than looking holistically at the results of assessments of social and emotional functioning, in most studies of poor children's social competence each dimension is treated as a separate variable and then tested for correlations. This creates an artificial separation between knowledge, behavior, and skills, which are known to work in conjunction with each other during development. Measurement procedures reflect this atomistic extreme as well. The performance-based tasks described earlier ignore research showing that cognitive performance is highly influenced by the social and emotional aspects of context (see Monette et al., 2011) and assume that young children can perform at their fullest capacity under any circumstances simply by being prompted.

The composition of elementary school classrooms and the cultural responsiveness of the teacher impact children's behavior and academic achievement (Jensen et al., 2020; Sutton et al., 2021). Research in this area suggests that measuring individual children's "problem behaviors" will provide far less useful insights than attending to the relational dynamics among all members of a given class – especially those that occur between teachers and students. Excluding classroom factors that are known to shape children's behavior from performance task and teacher survey data decontextualizes the meaning of such results.

In addition to the face validity problems with secondhand reporting of complex psychological concepts, the general bias of such methods have been well documented. Research with a nationally representative sample of Head Start and low-income early elementary school attendees indicated

that teacher ratings did not consistently predict children's problem social behavior (Hamre et al., 2008). Instead, teacher ratings of children's behaviors were more strongly related to teachers' own characteristics than independently observed child behavior (Hamre et al., 2008). In a study of teachers' perceptions of preschoolers' pretend play, a racially diverse sample of teachers attributed negative adjustment only to the Black preschoolers in their classes despite there being no difference between their play behavior and that of the white and Latinx children (Yates & Marcelo, 2014).

A recent study showed significant differences in ratings for assessing social skills between parents and teachers (Heyman et al., 2018). The biggest discrepancies were for low-income children because teachers gave much lower ratings of social skills to poor children than they did to middle-class children. Parents of both income groups rated their children higher than the teachers did. These findings point to issues with basic reliability in the use of such measures.

Temperament – a well-known determinant of behavior as originally reported by Kagan (1989) – has been shown in countless studies to impact the responses of people to the environment, especially to change. For young children, temperament affects the ease of transition between activities and participation in whole-group settings but is not associated with negative or positive outcomes on its own (Gobiel-Bourdeau et al., 2022; Kagan, 1989). However, along with other well-researched constructs that contribute to young children's behavior at school, temperament is often left out of the Head Start research. Yet differences in temperament along with many other factors not within a four-year-old's control explain individual differences in areas such as compliance, direction following, and participating during teacher-directed tasks. In addition to innate personality differences, the impacts of race, class, and gender on how teachers perceive, respond to, and thus shape children's responses to them have been widely demonstrated. For example, a study one study showed that among low-income preschoolers, those who had more negative perceptions of their teachers were also scored more negatively by those same teachers (Mantzicopoulos & Neuharth-Pritchett, 2003). The negative child perceptions of their teachers were also correlated with lower academic achievement scores. In addition, male African American children had the most negative perceptions of their teachers and were scored lowest on social skills and highest on problem behaviors by the same teachers (Mantzicopoulos & Neuharth-Pritchett, 2003).

These findings suggest that children as young as preschool age are aware of their teachers' perceptions of them, and more disturbingly that these negative perceptions and expectations influence how children behave socially and emotionally as well as academically. Given this, it is impossible to believe that teacher reports represent a neutral, objective system for rating children, especially those who are categorized as "at risk." Instead, such measures embed bias – especially toward low-income, African American, and male children – into studies that use them.

This methodological trap of atomism, decontextualization, and bias creates an endless loop wherein our biased notions of how children born into poverty and from historically oppressed racial backgrounds should behave inform the research design used to measure what it is we believe they should be able to do but can't because they are at risk. The concept of school readiness – that from under the oppressive heap of the multiplied risk that our society allows such children to experience they should, of their own accord, emerge ideally socialized via the sheer force of compliance with teachers in classrooms whose curriculum, environment, and activities may not be relevant to them – is a harmful farce that does nothing to address the needs of children and families. But this is not the only way to understand this population of children.

Another Way

Alternative methods must first detach from exclusive reliance on national data obtained from clearinghouses using flawed measures. Small-scale observations of children in context have provided holistic, contextualized, processual accounts of the development of children from various income backgrounds. Such studies provide sensitive observational schemes for understanding children from the "at-risk" population. Studies of children placed at risk must first seek to understand their development before assuming that they need to be fixed. An attitude of curiosity rather than judgment could allow methods designed to capture the widest range of variability among the population rather than focusing only on the most harmful effects of poverty on children. In addition, to conduct basic research on the social development of children placed at risk, it is necessary to redefine the social domain. As long as individual skills continue to comprise our notion of social development, researchers will continue to use the social skills of middle-class majority white samples of children as the metric for comparison. Racial and class biases are embedded in the way we assess and norm individual social behavior.

Using similar measures with slight changes will not create a culturally valid way of defining social development for all children. Instead, it is necessary to treat social development as innately social. Social interaction as a component of relationships within which children's social behavior has meaning can provide a lens on their competence that would be otherwise missed. Rather than a discrete skill, like the ability to hold a pencil, all children use social behavior to achieve goals, build connections, and make meaning. We must first discover the unique ways in which minoritized, culturally diverse children from low-income families with various national origins and languages demonstrate their social competence before assuming that they can be captured by the same indicators used for white middle-class children or defined by compliance with teachers. To provide this expansive lens for observing and capturing such development, we must shift the unit of analysis from the individual to the collective.

Collaborative Competence

The concept of collaborative competence at the center of this book has been developed for this purpose. Throughout, I argue that children's naturalistic collaborations with one another in school, beginning with those that occur during the free play periods of Head Start classrooms, offer an ideal context through which to understand development. This approach is holistic, contextualized, and process-based designed to highlights areas where so-called children placed at risk have been shown to be typically more advanced than their white middle-class counterparts.

Collaborative competence provides an alternative means of understanding and assessing children's development. The impetus for this concept is to provide a culturally valid way of describing and measuring the social behavior of children placed at risk. However, the collective lens for assessing social behavior offers new insights for understanding all children. By looking at how social behavior functions in dyads and small groups, numerous discoveries regarding young children's capacities become possible.

Although social competence and collaboration have been studied as separate concepts, connecting competence with collaboration signals a shift in both conceptualizations. Competence is typically assessed among individuals in relation to mastery. Once an individual has gained competence in a specific area, they are unlikely to lose it. This set of

associations with the idea of competence is very much ingrained in Western psychology, philosophy, and values (Cole, 2013; Harkness & Super, 2020; Valsiner, 2017). These ideals conjure the image of the developing individual moving forward on a solitary path toward some clearly defined goal that represents individual achievement. This vision may appear triumphant, inspiring, and heroic or, alternatively, selfish, disconnected, and lonely depending on the cultural context within which it is viewed (Tobin et al., 1989, 2009).

Collaboration, on the other hand, automatically implies interaction. It is one of the few Western psychological concepts that does not have an individualistic definition (Cole, 2013; Valsiner, 2017). Collaboration has not been the focus of research within traditional developmental psychology to the same extent as related but more individualistic notions such as "social skills," "emotional regulation," and "perspective-taking". Collaboration describes an ideal form of social interaction, one in which interacting parties are mutually engaged and equally contributing to some shared endeavor.

Given the preceding descriptions, the concepts of "competence" and "collaboration" have been conceptually opposed within developmental psychology. The former reflects individualistic assumptions that guide standard assessment, whereas the latter is mainly found in approaches that challenge individualistic norms and assumptions. To investigate the process whereby collaborative competence develops during a real-time interaction, it is necessary to diverge from how standard assessments frame developmental achievements. The nature of collaboration as inherently interactive and irreducible to the individual is simultaneously in conflict with how most forms of "competence" are conceptualized. Therefore, the term "collaborative competence" on its face presents a tension with most assumptions of developmental psychology. However, the idea of competence is important if researchers and educators are to take collaboration seriously as a driver of development. The idea that collaborations can be assessed implies that, like individual skills, they vary in effectiveness and are influenced by factors that either support or detract from their efficacy.

The purpose of bringing these two ideas together is to provide a way of systematically documenting collaborative processes that develop between children. This method can be applied to a wide variety of interactive contexts that are valid across a variety of cultural norms. The goal of this book is to provide a methodology for both practitioners and researchers to capture the complexity and nuances of collaborations. Through assessing

collaborative competence, those features of classrooms and relationships that are most conducive to supporting highly effective collaborations will also be identified. In this way, the concept offers practical information and serves as a critical alternative to more narrow conceptualizations of the role of interaction in development. Collaboration develops, functions, and ceases within the context of an ongoing interaction. Therefore, defining an ideal collaboration requires a notion of competence that is also inherently interactive.

Collaborative competence serves as a concept that can document children's growth and development within schools and classrooms over time. Documenting and assessing how children collaborate at different points in development, within different contexts, and for different purposes represent an alternative to the methodological trap that views children "placed at risk" through a deficit lens. Studying collaborative competence requires careful attention to the details of social interaction – to the ways that myriad components intersect to produce moment-by-moment change within a dyad or small group. This analysis can produce concrete implications for teachers. Introducing new material, changing interactive partners, or adding in a suggestion can change the flow of the collaboration. Although this does not provide a linear trajectory from one individual milestone to the next, it can reveal trends and patterns in how groups learn to work together over time. This set of patterns could be scaled with the potential to predict group outcomes from environmental factors, as well as to produce changes based on interventions to group work that shape collaboration experiences. Expert collaborators during free play in Head Start programs may become highly effective project team members in high school. Ideally, support provided during play to enhance creativity and interactive dynamics among group members can carry through into the collaborative activities of kindergarten and 1st grade classrooms. Children who experience such support will apply their collaborative skills together as they change developmentally over the course of their school careers.

It is tempting to include a depiction of how individual children internalize the collaborative skills that they then apply to future groups. However, the concept of collaborative competence offered here resists the tendency to individualize and maintains that even within the context of a developmental trajectory collaborative competence must be analyzed at the group level. Because moments of competence peak and wane over the course of an interaction according to emergent group dynamics, no one child can be deemed more or less

"collaboratively competent" than another. However, longitudinal studies can investigate how collaborations change at different ages, controlling for the influence of individual differences. Studies can also investigate the impacts of familiarity and prior relationships on collaborative competence by following paired cohorts in which children remain in the same class over multiple time points. Thus, studies of collaborative competence can answer two related but distinct sets of questions that have not been addressed in the literature thus far.

One area of investigation seeks to discover and formalize descriptions of the process of how collaborative competence develops among different ages and within different contexts. The other investigates the impacts of various contextual factors on the quality and nature of collaborative competence. These factors include the social context of the interaction (prior relationships/familiarity, gender composition, size of the group and other group-level or relational components) defined at the group rather than individual level. For example, rather than asking about each participant's language status, measures would reflect the extent to which the group members share the same first language. The social context might also include the institutional context in which the interaction occurs, such as school, playground, or home, as well as the adults and other children present in the larger space where the interaction occurs. Similarly, materials and space may be analyzed on two levels: firstly, the most proximal materials that are used during the interaction and the space in which it occurs; and secondly, the more distal forms of space and materials that characterize the broader environment surrounding the interaction. Through this approach, the results obtained might suggest immediate interventions to elements of the concrete social and environmental context that impact how collaborations develop. Beyond this, investigations of the cultural historical context, including the institution, neighborhood, and geographic location, could be useful in revealing the meanings of various shared activities.

In summary, this approach signifies a change to the way research within developmental psychology functions. Nonetheless, countless findings within the fields of social development and education are useful in informing the methods and measures necessary for the study of collaborative competence. Therefore, a large portion of this book is devoted to reviewing previous relevant literature. The purpose of these reviews is to enable a synthesis of what works for interactions at various ages and within different contexts.

The Content of This Book

This book includes four parts. Part I, which includes this chapter, lays out the two major arguments against the status quo in research on children's social development. The first, articulated by this chapter, concerns the problems of validity with current research methods, particularly regarding how the social development of children born into poverty is defined and studied. Chapter 2 reviews the issue of cultural validity in foundational conceptions of child development, especially social development. That chapter argues that the concept of collaborative competence rather than individual social competence reflects majority world cultural conceptions of child development and child-rearing values.

Part II of the book includes four chapters that examine the preexisting literature that informs the concept of collaborative competence. Psychological theories define subjectivity as an individual's perceptions and experiences of the world in varied ways according to different assumptions and areas of focus. Intersubjectivity is defined as a comingling of subjectivities between people that involves an exchange of thoughts, emotions, and intentions and is a major component of collaborative competence. Chapter 3 reviews theories of subjectivity and intersubjectivity from across various disciplines and within developmental psychology. Chapter 4 details how children of different ages and in varied contexts engage in peer interactions that demonstrate intersubjectivity. That chapter shows how, according to the theory being used, interactive behaviors may or may not be included as evidence of intersubjectivity. The purpose is to argue for a theory and method for documenting intersubjectivity among children that supports the construct of collaborative competence. Chapter 5 reviews the literature on interactions in different social contexts such as home and school. The focus of that chapter is on forms and qualities of interactive behavior that promote development across multiple contexts. The goal is to ensure that measures of collaborative competence reflect what is already known to comprise ideal interactions. Chapter 6 delves into the collaboration literature in depth, drawing parallels between the findings of studies of collaboration at multiple ages and in varied contexts. That chapter then introduces complexity as a component of construct of collaborative competence.

Part III builds upon the arguments and findings presented earlier to offer a detailed theory and method of collaborative competence. Chapter 7 outlines the full model of collaborative competence presented in this book. Examples of how the construct has been demonstrated with two related

research paradigms – qualitative analysis of preschool peer interactions and elementary-aged guided learning activities – are provided. Chapter 8 describes the detailed principles informing the methodology for assessing collaborative competence. It then describes how these methods will be applied to preschool peer interactions. The application to both qualitative and quantitative approaches and the relationships between them are elaborated. Chapter 9 reports on the results of a quantitative study of collaborative competence during naturalistic preschooler peer play across five Head Start centers. This research addresses various questions about the processes by which children collaborate and the influences on the quality of their collaboration, including the impacts of various proximal and distal contextual factors. Chapter 10 details the results of a small-scale study of early elementary teacher-guided collaborations using some of the previously discussed measures and adding measures of dialogic communication. This method combines a quantitative and qualitative approach to illustrating how collaborative competence emerges at different points in an interaction and in relation to different components.

Part IV focuses on implications for both research and practice. Chapter 11 discusses concrete changes to education that would support the development of collaborative competence among children in school. Chapter 12 addresses the need for a theoretical paradigm that embraces the assumptions underlying the concept of collaborative competence. The goal is to align with an overarching theory that would allow the new methods required to study collaborative competence to emerge, as well as other ways of studying development using interaction as the unit of analysis.

In summary, this book sketches out a new concept and an accompanying new methodology for the study of social development, especially among the so-called at-risk population of children that has long been the focus of research in child development. Therefore, this book offers both an extensive critical review of the field and a road map for a more valid, inclusive, and meaningful way forward.