Appendix: Positionality Disclosures

Daniel Hajovsky

My long-standing interest in testing and psychological assessment probably originates from my early childhood experiences. As a young child I was delivered the heavy news that I had significant sub-average intellectual functioning. I did not know at the time how significant hearing problems resulting in hearing loss would affect my ability to focus and learn information, especially verbally presented information. Although I do not personally remember this experience, the conversations about it set off a long series of efforts to avoid this self-fulfilling prophecy of being labeled inadequate or unable to achieve my goals. The mystery of the brain and neurological functions also fascinated me. When I was around age 16, I wrote our local neurologist (New Braunfels, TX) and asked about how memories are formed and what is the function of the association cortex. I tried to consume (though didn't fully understand) Antonio Damasio's work on memory formation. Fast forward to undergraduate years. I started off in Biology desiring to become a neurologist but landed on psychology. I began working for a test preparation company and became interested with test construction and the different patterns and strategies for solving different test items. I worked as a test tutor for undergraduate (SAT), graduate (GRE, GMAT), and law school (LSAT) admissions including a few summers working for the McNair Scholars Program. It was around this time that I became aware of published works on studying the science of mental ability and individual differences. It was then I knew I wanted to pursue a doctorate in school psychology to study the measurement and assessment of intelligence. I attended the University of Kansas to work with Dr. Matthew Reynolds, who was an academic descendant of Timothy Keith. I also worked over four years on a multi-year grant-funded project called the *Center for Response to Intervention in Early Childhood* (CRTIEC) at

the Juniper Gardens Children's Project. The culmination of these experiences helped shape my understanding and beliefs about assessment, individual differences, and the role of intervention in developmental outcomes.

My early graduate training and subsequent professional experiences emphasized the importance of early intervention and prevention. Working in at-risk early childhood settings highlighted the impact that high-quality evidence-based interventions delivered in a small-group or one-on-one setting can have on a young child's trajectory. It also helped me contextualize some of the theoretical arguments made in the extant literature and how they compare when implemented in actual practice. These training, research, and professional experiences helped me arrive at the still unsettled place of SLD identification.

My beliefs about SLD identification probably reside in an identification method that doesn't strictly yet exist. In my view, RtI should always be implemented, whether to rule out a lack of instruction or to determine the intensity of supports needed. I am not convinced RtI alone is a defensible method for valid SLD identification. Similarly, I do not believe that IQ tests alone are sufficient for appropriate and valid identification, and we probably do too much of it. In fact, I think more than anything cognitive testing lends more clarity to understanding academic skill deficits rather than determining academic skill deficits (though I do believe cognitive deficits increase the probability of developing an academic skill deficit). Our psychological measures are not always sensitive to detecting quantitative differences between people, which makes identification of a disorder on a continuous distribution difficult. A more circumscribed approach to cognitive testing seems warranted, only after RtI has been implemented with fidelity over a sufficient period of time. We should probably limit our cognitive testing to our most researched and well-supported areas of cognitive functioning (e.g., phonological processing, rapid

automatized naming, working memory) and how they are related to academic deficits (i.e., dyslexia). This belief of mine is coupled with the fact that not every referral case needs an IQ assessment. In some cases, it helps to know more if the case is confounding all hypothesized interpretations and case conceptualizations. I also think understanding the 'why' can be helpful in an end of itself in some cases. In other words, I think it is prudent to flexible to the idiosyncratic needs of the referral concern. The lack of a 'one-size fits all approach' may not be the way to tackle this persistent professional issue. We should not let perfect be the enemy of good when it comes to assessment and identification. I am a hopeful optimist that we can develop some broad and common standards and build out from there.

Kathrin Maki

Prior to obtaining my Ph.D. in school psychology, I practiced as a special education teacher in a large public-school district. Many of the students with whom I worked received services as students with an SLD. My students certainly demonstrated academic needs, with many students exhibiting reading, math, and writing skills that were more than one grade-level below their current grade. However, I wondered what other factors were influencing their referral for evaluation because many of the students with whom I worked also exhibited complex behavioral and attention difficulties. I wondered if students were referred for evaluation due to their complex difficulties and they simply happened to be eligible for SLD under my state and district's identification methods. My teaching experience made me question how our SLD conceptualizations and identification methods impact practice, and most importantly, educational experiences for kids. As a result, my teaching experiences triggered my interest in SLD, which then served as the impetus for pursuing my Ph.D. in school psychology and research agenda.

I completed my school psychology graduate training at the University of Minnesota (UMN), graduating in 2016. Prior to attending the UMN and working as a special education teacher, I obtained an M.Ed. from Vanderbilt University in Special Education. The UMN's research and training history is rich, housing the Institute for Research on Learning Disabilities (IRLD) and being the center of the development of curriculum-based measurement (CBM) in the 1970s and 1980s. Even 45 years later, the research on SLD and CBM at the UMN influenced my training and current conceptualization of SLD and perspective on SLD identification.

Both of my graduate training environments and the experiences I received within them emphasized the utility and importance of Response to Intervention (RtI)/Multitiered Systems of Support (MTSS) to prevent and intervene with student difficulties. Moreover, specific to SLD, I was trained in the perspective that RtI was the most appropriate identification method for SLD, given the benefits of RtI (e.g., treatment validity, repeated measurement of skills) and the issues with AAD and PSW (e.g., lack of treatment validity, reliability and classification accuracy shortcomings). Further, my training de-emphasized the utility of cognitive tests generally in line with the perspective that cognitive testing lacks treatment utility, which transferred to their use for SLD assessment and identification decision-making.

Taken together, my training and experiences have shaped my perspective and research on SLD identification. Those familiar with my work may find it surprising that I find some conceptual arguments for AAD and PSW compelling. However, in my view, the notable psychometric issues underlying these methods precludes them from implementation with children at this time. Given these issues with AAD and PSW, I *want to* orient toward RtI for SLD identification. Although RtI is not immune from measurement issues, *when implemented effectively*, RtI provides support services during the assessment process, uses low-inference

decision making, and uses repeated measurement rather than measurement at one time point. However, I also do not presume that RtI *truly* identifies SLD, at least in terms of how we have historically conceptualized SLD (i.e., a psychological processing disorder). But (and I recognize that this perspective will not resonate with everyone), I also do not care if RtI does not identify students with a psychological processing disorder, particularly given training psychological (or cognitive) processing deficits has not been shown to be effective while targeted academic interventions have been shown to be effective across student cognitive processing abilities. I am particularly troubled when students with academic difficulties do not get access to needed academic supports or when identification methods inconsistently identify students with SLD, resulting in inconsistent special education service provision for students. AAD (and to some extent, PSW) has been shown to systematically disadvantage students with certain skill profiles (e.g., the "garden variety poor reader"). Does my perspective overly pathologize students with academic difficulties? I do not know; it is certainly not my goal, especially given that special education services have not been shown to consistently result in positive outcomes for students.

Although much of my work and educational philosophy align with an RtI approach to SLD identification, I also have serious concerns about its applied use. Large-scale systems implementation (and change) is extremely challenging, and the ineffective implementation of appropriate evidence-based interventions, assessments (screening, progress monitoring, diagnostic), and data-based decision making undermines RtI's use for SLD identification. Moreover, a significant number of students exhibit reading and math difficulties (National Assessment of Educational Progress, 2023), underscoring the need for effective tier 1 instructional practices. Without effective tier 1 instruction and manageable numbers of students needing tier 2 and tier 3 intervention, MTSS/RtI implementation will fail, and as a result, so will

SLD identification. In the face of ineffective RtI implementation, there is no way to differentiate students who are instructional and intervention casualties from those who have SLD. We may be approaching a critical point in schools when RtI is not working for SLD identification due to challenges with systems-level implementation. I still *want to* believe in RtI for SLD identification given the evidence-base underlying RtI components. Yet, the empirical support for effective MTSS/RtI systems-level implementation is lacking. And, as with AAD and PSW, beliefs and conceptual arguments are not the same as empirical validation.

Christopher Niileksela

I came to psychology, and school psychology, slightly later than many of my colleagues in school at the time. Originally starting out as a musician with the goal of playing professionally in an orchestra, I later found that, at least for me, music was a better hobby than a career. Near the end of my undergraduate training in psychology at Arizona State University, I worked in a research lab for Nancy Eisenberg and took a course with Peter Killeen, giving me a foundation in developmental psychology and behavior analysis that resulted in years of reading and study in these areas. I joined the School Psychology program at the University of Kansas, where the training was focused on developing scientist-practitioners who function primarily as psychoeducational consultants and evaluators. The school psychology program had a balanced focus on consultation and assessment, and I was able to maintain a focus in applied behavior analysis as a self-built minor in the program. During this time, I had a chance to work with Greg Madden in an animal lab and learn extensively about judgment, decision-making, and behavioral economics. Like music, I thought this was going to be my focus moving forward, but working in the schools changed the focus of my interests, mostly due to the problems that I saw related to SLD identification. At this time, I also began to become interested in other quantitative methods

beyond the single-case focus of behavior analysis, and that is ultimately where much of my research and interests have continued.

I was initially trained to assess and identify SLDs from the perspective of the DSM-IV and DSM-5, with a focus on conducting comprehensive evaluations that integrate an individual's history with results from cognitive and academic assessment. I became interested in SLDs as an area of research after working for Topeka Public Schools, where a traditional AAD model that required 23 standard score points between a cognitive and achievement measure was used to identify SLD. This approach was very different from my training, and in practice I saw many students who clearly needed help or had very limited academic skills that did not meet this discrepancy criterion. During my time in Topeka Public Schools, the district moved to a PSW model of SLD identification, and I was involved in the development of the policies and procedures around the application of this model. During this time, I was also completing my dissertation and began working more closely with Matthew Reynolds, who was a co-chair for my dissertation, and where I was introduced much more deeply to theoretical perspectives of cognitive assessment and functioning. CHC theory and its influence on test development and interpretation had an important impact on my thinking at this time and it was important for me while developing an understanding of tests and what they are meant to measure.

While working for Topeka Public Schools, I completed my Ph.D. and eventually began teaching at the University of Kansas. Eventually, I completed my postdoctoral work in a clinic where I primarily conducted evaluations, focusing on evaluations for SLD and other high-incidence disabilities. I worked in a private practice as a licensed psychologist where I also primarily conducted evaluations for SLDs, and at the same time I was supervising students in a training clinic for the School Psychology program at the University of Kansas who were

conducting psychoeducational evaluations, primarily for SLDs. My experiences as a clinician and researcher have shaped how I view SLDs and SLD identification. My training focused on a clinical synthesis of data using multiple measures, methods, and sources to understand a person's current concerns in the context of their background and educational history. I have come to find that the use of data from history, intervention, and norm-referenced assessments, with a focus on understanding and integrating quantitative and qualitative information, is essential for identifying SLDs. I do not necessarily endorse or closely follow and apply any specific model that is currently used to identify SLDs (besides following required diagnostic criteria from the DSM-5 for clinical assessments). In my view, all models of SLD identification have psychometric issues that are difficult to overcome using traditional assessment scores and statistical methods, especially when strict rules are applied to test scores, requiring specific score thresholds and score differences. Ultimately, I believe that what we talk about as "SLD" exists and is likely due to neurobiological differences in cognition. However, our current use of tests and test scores that rely primarily on continuous distributions and are not designed to differentiate amongst groups will not likely do the work we hope they will for SLD identification (e.g., there is not a specific score thresholds that differentiates "SLD" from "not SLD"). If individuals with SLDs represent a qualitatively different group, we need to conceptualize, develop, and ultimately utilize measures that adequately differentiate these groups (assuming that is possible). Ultimately, I hope that we can develop models of SLD identification that appropriately model and acknowledge the uncertainty that exists in test scores based on continuous distributions, and I hope practitioners can use that information to help inform their decisions about SLD.

Ryan McGill

Beyond the *de facto* graduate training in a specialist-level training program, my interest in clinical assessment was fostered by attending a seminar led by a prominent test author of a commercial ability measure. I was enthralled by the presenter's mastery and presentation of what, to that time, were esoteric psychometric concepts and vowed from that moment to develop an understanding of measurement at that level. I completed my specialist degree in School Psychology at La Sierra University in 2009 and immediately entered practice where my training in conventional "intelligent testing" (i.e. Kaufman, 1994) parameters was put to the test. Facing discrepancies between the prevailing zeitgeist and the reality on the ground I started to question the assumptions undergirding standard clinical interpretive heuristics (e.g., scatter analysis) which are often invoked as a form of veritable copypasta in many professional forums. Fortunately, I was also dovetailing as a doctoral student after work at Chapman University under the tutelage of Randy Busse who shared similar misgivings. Dr. Busse graduated from the University of Wisconsin-Madison under the supervision of Steve Elliott and thus I am a descendent of the "Madtown" problem solving lineage to some degree.

My initial doctoral studies focused on the assessment of RTI outcomes which fit nicely within my orientation toward objective measurement as a board-certified behavior analyst (BCBA). However, I soon began to recognize, what I perceived as, issues with decision-making issues stemming from measurement in the RTI paradigm. As a result, the remainder of my doctoral studies focused on the applied validity and decision-utility afforded by conventional IQ tests and related assessments of cognitive processing much to my advisor's chagrin. I am often asked how one with my epistemological background came to be involved in this work? Put simply, I have always been interested in why folks behave the way that they do and believe that tests, when used appropriately, offer us valuable insight on psychoeducational functioning.

Psychodiagnostic decision-making exists on a continuum ranging from the general to the specific and the more specific our decisions, the more precise our point predictions need to be. In this way, I suspect I am a mere "dustbowl empiricist" in the tradition of Meehl (1989) and other clinical scientists influenced by the Minnesota tradition.

Having conducted hundreds of learning disability (LD) evaluations, I am convinced that there is a biological etiology for the condition that separates so-called garden variety poor learners from children who *actually* have LD. That said, the question remains whether we have the technological capacity to assess at that level of specificity. In my view, cognitive tests are very good at what they do in assessing omnibus mental capacity (general). A question remains as to whether they are capable of delivering more precise prescriptions with regard to idiographic strengths and weaknesses with any legitimate clinical implications beyond the assessor's capacity for ornate story telling. As a result, I do not presently find the extant empirical evidence for alternative approaches to LD identification such as PSW to be compelling. Most clinicians do seem to have a preternatural ability to tell stories from obtained data even when many of these conjectures appear to be illusory which is what prompted Kaufman (1994) to develop the so-called intelligent testing paradigm to begin with. Regardless, I do believe there is some inherent value in the use of cognitive tests in SLD identification to some degree, if nothing more than as a way to operationalize unexpected underachievement (McDermott et al., 2006). Additionally, I stipulate that conventional RTI as it were (which has become a pejorative in the literature) is necessary but singularly insufficient for LD identification. My focus is on what is *additive* beyond those low inference data? In this way, I feel that my theoretical perspective is somewhat unique in that I have experience as both a practitioner and a scholar with orientations that I believe transcend our current level of balkanization on the matter. If pigeonholed, I would regard

myself as a radical pragmatist though I believe that any and all approaches to assessment of clinical disorders such as SLD would benefit from adhering to the tenets of the evidence-based assessment framework (Youngstrom & Prinstein, 2020).