In the letter of application (addressed to the Scholarship Review Committee), the applicant should describe her goals after completing her academic program. Explain why these goals have been chosen.

As a doctoral student in child language at the University of Kansas, I am fortunate to learn from leaders in communication sciences and disorders who strive to produce the best science possible. Their efforts benefit the students they teach and mentor, as well as the communities their research targets. Because of people like these, I have developed three concrete goals for my career post-graduation. First, I will work as a post-doctoral fellow to gain further experience in research and to learn how to run a laboratory. Second, I will be a tenure-track professor at a first-tier research institution, developing a longitudinal study on the language abilities of individuals with autism across the lifespan. Third, I will be proactive in supporting diversity and inclusivity in higher education, as well as in the field of communication sciences and disorders. These goals will help me become the kind of researcher individuals with autism deserve and the type of teacher from whom students benefit.

Upon graduation, I will pursue a post-doctoral fellowship to gain experience in research and in how to run a laboratory. Currently, I am a research assistant on the Morphosyntax Project in the Language Acquisition Studies Laboratory, directed by Dr. Mabel Rice. My work includes data collection, morpheme coding, survey development, and training on data collection protocols. One of the laboratory's members is a post-doctoral fellow and data scientist. Working with her has shown me the value of learning how to run a laboratory and how to conduct collaborative research. In addition to data management and analysis, she is also responsible for any number of tasks that come with running a laboratory: assisting undergraduate hourly workers, working with examiners and research assistants, communicating with collaborators, and determining which issues need to be discussed at laboratory meetings, as well as following up on solutions. This has taught me that although being a graduate student is a valuable experience, I will benefit from additional work experience in a laboratory before developing my own. Working as a post-doctoral fellow will provide me the opportunity to learn how to run a laboratory and to further develop my research skills.

My second goal is to work as a tenure-track professor at a first-tier research institution. There, I will have the institutional support necessary to develop a longitudinal study on the language abilities of individuals with autism across the lifespan. In my coursework at the University of Kansas, I completed a mock NIH grant application for a 3-year study. Through this project and feedback I got, I learned the level of rigor that is required to be awarded hundreds of thousands of dollars in funding. My current experience includes working on a longitudinal study of specific language impairment, as well as a project to implement positive behavior support systems in local Kansas communities. My background includes working as a public school teacher of adolescents with autism. As a professor and researcher, I can apply what I am learning at the University of Kansas and honor those individuals with autism by investigating their language abilities across the lifespan. Specifically, I am interested in the trajectory of their language abilities in adulthood relative to quality of life indicators. I can accomplish this at an institution geared toward research, with access to resources that will help me carry out my study.

Last, but not least, my third goal is to remain proactive in supporting diversity and inclusivity in higher education, as well as in the field of communication sciences and disorders. At the University of Kansas, I am a member of the Speech-Language-Hearing/Child Language Doctoral Program Graduate Student Organization, the Student Speech-Language-Hearing Association, and the Asian-American Pacific Islander Union. Furthermore, I have attended a workshop on the intersectionality of racism and LGBTQIA, and a series of lectures on race and culture to promote inclusivity and understanding. Through the American Speech-Language-

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Hearing Association, I am a Student to Empowered Professional mentee, a Minority Student Leadership Program cohort member, and a member of the Asian Pacific Islander Caucus. These experiences have been greatly educational. In addition to my own experience as a student of color, they have driven home the fact that students of diverse backgrounds are often marginalized and face adversity that jeopardizes their academic success. They have also highlighted the need for diversity and inclusivity initiatives in communication science and disorders and in higher education. Most importantly, these experiences have been opportunities: opportunities for learning how to create a safe learning environment for all students, opportunities for critical self-evaluation, opportunities to build community and fellowship, and opportunities to advocate for, engage, and support students of diverse backgrounds. Already in my toolkit, I have an anonymous survey instrument to set a tone of inclusivity in the classroom. I have also worked to promote diversity by giving a talk on the Minority Student Leadership Program at my institution. I am thoroughly committed to supporting diversity and inclusivity, because if students do not have access to opportunities or safe spaces, it becomes all the more difficult for them to achieve.

My goals after I graduate from the University of Kansas are idealistic, but also realistic. I am investing five years of my life to learn from some of the strongest researchers in communication science and disorders. In return, I am receiving mentorship, support, and training that is preparing me to contribute to the ongoing dialogues in communication science and disorders. As a post-doctoral fellow, I will build my skill set, learning to run a laboratory and to focus on information dissemination. This will enable me to establish a laboratory and to be awarded the large-scale grants needed to pursue programmatic research. These goals are ambitious, but fairly straightforward. If awarded the ASHA Foundation Minority Scholarship, I will be one step closer to achieving them.

Peter Drucker, the late great thought leader who influenced leadership and management practices worldwide, observed, "I never predict. I simply look out the window and see what is visible but not yet seen." As a future professional who will serve the many individuals with communication disorders, look out your window and reflect on today's ever-changing global landscape. It's all out there, the next decade that is yet to be defined. What will define the next decade for successful leadership in the discipline of human communication sciences and disorders?

In the next decade, leaders in communication sciences and disorders will be defined by their ability to work across disciplines to answer big questions. One such question is how to account for inter-individual variation in the way of adverse developmental outcomes, such as language disorders. I am being challenged in the child language doctoral program at the University of Kansas to think about how to connect the behavioral phenotypes of language disorders to causal pathways. Although language is taught in terms of vocabulary acquisition or syntax, it is a construct that exists from gene to protein to neuronal network to brain to language. This requires a comprehensive conceptualization of language and collaboration. Some researchers, including Hasim Raza, and Mabel Rice, are already working in this way. Future leaders in communication sciences and disorders will have to continue treating language as a comprehensive construct if they are to shed light on the causal pathways of language disorders. Research on specific language impairment (SLI) provide a good example of what interdisciplinary investigation ought to be.

At the American Speech, Language and Hearing Association Convention in 2014, the research symposium addressed primary language impairment in children with concomitant health conditions or nonmainstream language backgrounds. These questions were part of a larger dialogue on SLI, which was omitted in the 5th edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Factors in its omission as a specifier for language disorders include its unavailability in clinical settings, issues with diagnosis, and lack of agreement among scientists on the construct of SLI (American Speech-Language-Hearing Association, 2012).

In response to this omission, researchers and practitioners debated the issues that make SLI controversial, including common terminology, diagnostic label, and diagnostic criteria (Bishop, 2014; Ebbels, 2014). Many of the issues seem to arise from the lack of a stereotypical language learner with SLI (Tomblin, 2011), which highlights the lack of agreement on the construct of SLI. Yet, participating commentators agreed on several accounts. One common theme was the need for careful, research-based assessment (Baird, 2014; Lauchlan & Boyle, 2014; Mabel L. Rice, 2014). Considering that current standardized instruments may fail to capture phenotypic variability, accurate assessment is crucial for diagnosis (Bellair, Clark, & Lynham, 2014). Assessments that have poor sensitivity for SLI complicate diagnosis, even without co-morbid conditions that already may mask diagnosis, such as attention-deficit/hyperactivity disorder (Redmond, Thompson, & Goldstein, 2011), autism (Tager-Flusberg, 2015), cochlear implants (Markman et al., 2011), or being an English language learner (Paradis, Schneider, & Duncan, 2013). Another common theme was that a diagnostic label confers validity to individuals with unexplained language problems, facilitating advocacy and funding for treatment (Baird, 2014; Bellair et al., 2014; Lauchlan & Boyle, 2014).

On the research side, consistency across studies enables replication (Strudwick & Bauer, 2014), and consistency of terminology facilitates further research and advocacy for research funding (Howlin & Taylor, 2015; Mabel L. Rice, 2014). The take-home point of the SLI debate is that the behavioral phenotypes must be worked out. To fully appreciate SLI, clinicians and researchers must be able to reliably identify SLI in a way that captures its phenotypic variability. Despite it being unavailable in many clinical settings (American Speech-Language-Hearing Association, 2012), SLI is a longstanding construct that adversely impacts people's lives. One charge for the next generation of leaders in communication sciences and disorders is to clarify

the nomological network of SLI, or the concepts that comprise SLI (Cronbach & Meehl, 1955). Another is to translate this knowledge into reliable diagnostic tools.

There is also much to be worked out in understanding the genetics of language and language disorders. Recent evidence suggests that multiple layers of neural circuits may be associated with the multiple levels of phase structure (M.L. Rice, personal communication, May 3, 2016), but the neuronal circuitry of language processing has yet to be worked out (Poeppel, 2011). One hypothesis is that epigenetics contributes to language disorders (Smith, 2011). Epigenetics are mechanisms above the genome that involve DNA or protein modifications, and carry information during cell division, but do not change the DNA itself (Mabel L Rice, 2012; Smith, 2011). Environmental signals during early development influence neural development and function, with epigenetic regulation acting as a biological signal that remains stable in transcription (Hellstrom, Dhir, Diorio, & Meaney, 2012; Lester, Marsit, Conradt, Bromer, & Padbury, 2012; McGowan, Meaney, & Szyf, 2008). Thus, it may be environmental signals that are responsible for language disorders. Several of six candidate genes for reading disability and language impairment have been implicated in neuronal migration in the rat brain, meaning that early development is a critical period (Smith, 2011). It should be noted that although these epigenetic modifications are reversible, which is promising for developing therapy, they only account for a small portion of the phenotypic variability in RD and LI (Smith, 2011).

Another hypothesis is that mutations in coding regions of the genes or DNA binding regions cause the adverse developmental outcomes of language disorders (Reader, Covill, Nudel, & Newbury, 2014). Future work in the genetics of language disorders will have to focus on identifying the mutations, wherever they may be, that cause the phenotypic variability of language disorders. Both genome-wide association studies and targeted analyses can help identify the location of heritable mutations of reading and language disorders (Smith, 2011). Such investigations will have to consider that a collection of genes is responsible for producing disorders, such as SLI (Reader et al., 2014). Another consideration is that if language measures are inconsistent across studies, results cannot be compared across studies. In a review of genome-wide studies of SLI, Reader et al. (2014) note the variability in the loci of candidate genes across studies and attribute it to the phenotypic variability of the disorder. Yet, each study used different measures and therefore assessed different abilities.

The case of SLI illustrates what needs to be done to answer big questions, such as how to account for inter-individual variation in the world. It requires a paradigm shift toward a comprehensive perspective on language, as well as collaborative work across the field. Behavioral scientists must clarify phenotypes and develop reliable diagnostic tools. Geneticists must work to identify causal mutations. I am being trained to participate in this effort by working on a longitudinal study of specific language impairment, pursuing coursework bridging molecular genetics with language, and researching teacher identification of specific language impairment. My work will help me not only to contribute to understanding the phenotypic variability of SLI, but also to appreciate the approaches of other disciplines, such as genetics, in an informed manner. As a future leader in communication sciences and disorders, I am committed to working comprehensively to answer big questions, bridging genetics and behavioral sciences. Being awarded an ASHA Foundation Minority Student Scholarship will help me continue focusing on my research and studies.

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