On Collaborations: The Opportunities

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No matter what accomplishments you make, somebody helped you.

-Althea Gibson, 11-time Grand Slam Champion

That brings me to the practice of science, and my conversations in these columns with early investigators in particular. There is an important tension when collaborating in teams to leverage greater resources — intellectual and material on the one hand, and establishing one's individual identity and contributions on the other. How do you navigate these competing goals across the span of your career, especially if you are just starting out?In sports, collaborations are indispensable. As the great Michael Jordan once said, "Talent wins games, but teamwork and intelligence win championships." In music, too, as Lin-Manuel Miranda of unprecedented "Hamilton" fame said, "The fun for me in collaboration is … working with other people just makes you smarter; that's proven." In business, the need for collaboration seems obvious.

Perhaps a brief history of my own path is useful to set the context for why I find this question fascinating. I have published single-author papers (especially during my assistant professorship), and I have also published papers in collaboration — with neurologists, neuropsychologists, cognitive

neuroscientists, social psychologists, clinical psychologists, clinical neuroscientists, computational modelers, cross-cultural psychologists, and of course, other cognitive psychologists. I have also thought about collaborations through another lens — as a past academic administrator (I was Associate Dean for Faculty Affairs) and as a member of tenure and promotion committees both within my department and in the College beyond. In these positions, I have reviewed tenure and promotion dossiers to assess the independent, original contributions of individual scholars. So, what counts?

The answer to this question requires that we consider at least two points. When is a good time to collaborate? And what are the challenges associated with collaborative ventures? Here, I address the first question.

Before we ask the question about when to collaborate, it is worthwhile to start at the very beginning. We learn to collaborate early even as we train to become independent scientists. We learn from, collaborate with, and publish with our advisors. This foundational training gives us the two key tools we need — skills for collaboration as well as independent expertise — to enter into future collaborations as unique contributors.

We now work in an era where research questions increasingly span many different boundaries — from basic to applied, across labs, disciplines and nations, using multiple tools, techniques, and technologies. In other words, collaborations make it possible to ask questions that might be difficult, if not impossible, to ask alone.

Take some examples covered in the past issues of the *Observer* that describe emerging fields of collaboration in psychological science. Cross-cultural research spanning geographic borders deepens and enriches not only the questions but also the methodology. Research that integrates expertise from behavioral science, computer systems engineering, and game theory is exploring ways to use the study of psychological deception in preventing cyber attacks. Research leveraging behavioral science can bring about policy changes. Combining child development, neuroscience, linguistics, and robotics has given rise to the new field of developmental robotics. Incorporating psychology, immunology, epidemiology, genetics, and nutrition is helping scientists understand the effects of psychological stress on health and aging through the senescence of telomeres. Several fields are collaborating in the use of expensive tools such as neuroimaging. And, going a bit farther back in time, the broad field of cognitive science has brought together disciplines such as cognition, linguistics, philosophy, computer science, and neuroscience.

These are just a few examples. Furthermore, not all collaborations need involve large-scale efforts. In fact, collaborations are common in dyadic arrangements or small groups where researchers pursue shared questions. But these examples make my point. In brief, it is useful to ask whether collaborations would advance independent, original lines of investigation; help us test new integrative questions emerging from our work; or create access to resources that benefit several disciplines or investigators.

Under such circumstances, when researchers find common ground and questions, collaborations can transform our work.