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My Perspective on the Conference

Last week, I attended DEAF ROC conference hoping to discover what it means to be a Deaf scientist and join the collaborative discussions on improving inclusion of scientists that identify as Deaf or hard of hearing. But I had realized that a theme was constant throughout the conference: **that people, either Deaf or hearing, always have the power to make a change, and that effective communication is a *shared* team responsibility**. I owe this realization to my fruitful discussions with scholars, scientists, and service providers.

What is Our Issue Here?

Frustrations, obstacles, or any form of struggles emerge for Deaf scientists when the academic or laboratory environment –typically designed to benefit those who can hear – does not accommodate their communication preferences or values. It can be that a hearing researchers engage in spoken discussions, excluding their Deaf partner whose ASL interpreter did not show up. Some laboratory machines generate sounds, making it a challenge for a Deaf scientist to follow through with their experimental plan. Or, hearing investigators are reluctant to hire Deaf researchers – even if those potential hires are extremely qualified – simply because employers are understandably unaware of how to communicate with those who do not necessarily share the same language as they do. It is hard to say how we can be prepared to overcome such barriers.

Main Takeaway from the Conference

It is rather unfortunate that those barriers persist across the country. But, the main takeaway for me was that we must embrace the idea that **every individual has the power to effect change**. One way to put it is that a disheartened Deaf scientist can be reinvigorated by their desire to succeed. To create new changes is to require innovative thinking and initiative, and that is indeed something unique about the community of Deaf scientists. As I took a delight in brainstorming ideas with Deaf and hearing attendees through workshop or dialogue, it was sobering to see, either in theory or reality, that such environments can be adapted to include Deaf scientists. One Deaf doctoral candidate had advocated for adding a whiteboard in her current lab. She has embraced her team who is currently learning ASL to communicate with her. Hearing researchers can also be proactive and innovative. A hearing physician proposed that some

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machinery sounds can be manifested in colorful flashing lights – a red flashing light indicates a machine problem, or a blue one, the machine is making good progress.

Deaf trainees are extremely organized by preparing to communicate with hearing people to find mutually beneficial solutions and demonstrate their talents. They have proved that their deafness does not prevent them from succeeding as researchers, and more and more hearing employers recognize this and advocate for making their labs diverse and inclusive. To recap what I just said, ideas similar to those ones can be brought or born in such collaborative dialogues initiated by people who are motivated to make the world of research inclusive, accessible, and especially welcoming for all...

Can We Change Ourselves? Why Should We?

Most of the time, I found myself pondering about how it is possible to activate people's such power? I got caught up in the interesting debate with scholars about choosing "activate" over "empower". It was just a matter of semantics, but from one scholar's perspective, the word "empower" did not better describe the human nature. It had connotated that people originally had no power when, in fact, their power was intrinsic in everyone and could be either dormant or activated. As much as I agreed with this view, I believe the best verb would be "**awaken**" here. When a person develops a solid understanding of others' experiences and a strong concern for them, their power will very likely be awakened. This is how it happens when you change people's hearts and minds by sharing your experiences and feelings with them.

As challenging our old assumptions is a common characteristic of doing science, **why shouldn't we also challenge our old attitude, behaviors, and values to change?** We have the capacity for improvement, so to improve ourselves and our relations with others, our power must be somehow awakened. Frustrations mutually arise for Deaf and hearing people because they do not see the other group's perspective. Barriers can awaken a Deaf scientist's power to change their own attitude by developing a thought that their hearing counterparts may not have realized what it is like to be Deaf. And, when that Deaf person expresses their experiences and challenges to help hearing people see their view, this can awaken a hearing investigator's power to make the lab inclusive. I believe humans are inherently good and have a desire for making their fellow beings feel equally valued.

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You all do have power to make things happen. For hearing people to get to that outcome, **be open to learning human experiences, changing your thought patterns, and generating ideas for inclusion with your Deaf mentees or colleagues.** Not being open to such processes can prevent us from providing effective solutions or building good relationships. Similarly, Deaf people already know that effective communication is key to get the ball rolling and change the hearts and minds of their hearing counterparts. **Be fearless to advocate for your right to be included and treated like an equal, and be prepared to come up with answers to get hearing people on your side.**

What Have We Done Thus Far? What Can We Do Now?

It is no brainer that we all have unique stories, but share common struggles. Learning stories about the conference or individuals from attendees can be enlightening, but it is not the same as *experiencing* the conference. Rather, conference is a such rich venue of information exchange and face-to-face communication. Take a break from your research and explore the conference. **Everyone came to the conference with different goals, values, experiences, and backgrounds. Others and I had tried to seek answers to our struggles or questions about our future career, vision of research, or promoting inclusion through collaborative discussions. Every individual was surrounded by people who wanted them to succeed in their own element and profession.** Hearing participants went to the conference with the goal of becoming better allies to the Deaf community. For instance, one lab manager who can hear participated in the Lab Inclusion workshop to learn how she could make lab accessible for Deaf trainees. Similarly, Deaf people engaged in academic forum to make their research accessible in ASL, share their emotional experiences of navigating barriers in doctoral programs, and serve as role models for inspiring future generations of scientists that are Deaf and hard of hearing.

In the past decade, there has been a boom of initiatives – education, diversity, outreach, or technology – that all make science accessible in ASL and increase the number of Deaf scientists. There are many out there who can do science, but are not given equitable opportunities or lack confidence to pursue this area. **We, Deaf and hearing, must work together as a community to foster mutual trust, relationships, and desire to prevent barriers from occurring.** By improving the representation of Deaf scientists and other minorities, we are doing

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justice to the world of ideas waiting to be discovered and transformed into realities by such diverse minds.

Like I said earlier, no one is the same. For this reason, I am confident that everyone had left the conference with a clear sense of what they are going to do just to advance inclusion of Deaf scientists. Imagine what your colleague, friend, or lecturer plan to do after the conference. **Such different paths are happening now...**

Tyler's Bio

Tyler M. Puggeda (Orange County, CA) identifies as culturally Deaf and audiologically hard of hearing. Tyler originally desired to be a biomedical scientist or physician since he was a child, but unfortunately could not pursue advanced science coursework due to access barriers in high school. He was unaware that the community of Deaf scientists exists, so he never thought he could become a scientist. This prompted Tyler to seek a bachelor's degree in mathematics and philosophy and explore the Deaf community's culture and sign languages at California State University, Northridge. There, Tyler received ongoing support to believe that he is capable of advocating for equitable access to education and learning biomedical sciences.

Tyler had a great privilege to challenge himself to engage with science classes, top-notch biology department, and hearing community of aspiring medical researchers through the highly selective Post-Baccalaureate Pre-Medical Program at Johns Hopkins University, famous for its leading NIH-supported medical research. Realizing his wish to be in biomedical sciences and immerse again in Deaf community with similar interests, Tyler is excited to join the Rochester Bridges to the Doctorate Program (NIH-NIGMS R025) at Rochester Institute of Technology -- renowned for its collaborative research and efforts on increasing the representation of Deaf and hard of hearing scientists -- and its sister host institution, University of Rochester.

This year, Tyler was fortunate to attend the DEAF ROC conference – his first time – to find a strong presence of Deaf and hard of hearing scientists and their hearing allies in a large room, and this community has convinced him that his journey has been worthwhile. Through the Bridges Program, Tyler looks forward to gaining research lab experiences in biochemistry and cell biology, advocating for cultural and linguistic minorities and allies in STEM, and making lifelong connections.