

# Re-envisioning Collaboration, Hierarchy, and Transparency in Audiology Education, Practice, and Research

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## ABSTRACT

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In this article five audiologists reflect individually and as a group on three perceived key challenges for their “cohort” of audiology clinicians, educators, and researchers. These three challenges were chosen based on practice, teaching and preceptoring, and research experiences and were inspired by related literature *outside* the young field of audiology. Audiology has the opportunity to look to older health professions that have faced similar challenges. The three challenges chosen for discussion were: collaboration, hierarchy, and transparency. A reflective dialogue ensued in which the group did not always come to an agreement. Yet the presentation of both our distinct and similar perspectives demonstrates the potentially generative and critical insights that can arise when we question the status quo and *imagine what could be*. This article is neither a research paper nor a literature review by any means. Rather, it serves as an invitation to ourselves and our colleagues to ask difficult questions about the way we are and to try to see ourselves *through the eyes of others*. In this way, as a new cohort, we may be able to continue to advance the field that has been built by audiology clinicians, educators, and researchers who came before us. And we strive to do this alongside the existing leaders who continue to work hard for audiology during challenging and

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changing times. Perhaps a critically reflective dialogue drawing from multiple perspectives can help us continue to improve, as a collective field, in a challenging economic climate.

**KEYWORDS:** Collaboration, critical reflection, dialogue, ethics, hierarchy, transparency

**Learning Outcomes:** As a result of this activity, the participant will be able to (1) use critical reflection to discuss key challenges in our field and possible solutions; (2) employ critical reflection to articulate a vision for the continued growth of audiology as a clinical profession and academic field.

A group of five audiologists—identifying with one or more of the following titles: academic researcher, educator, clinician, practitioner, and industry researcher—from North America engaged in a dialogic\* writing opportunity to consider challenges and possibilities for the continued growth of the field of audiology. We appreciate the great strides the field of audiology has taken to date as a result of the many great contributors and leaders from academic, clinical, and industrial settings, and anticipate the next set of achievements for the field to which we hope we will be able to contribute. Together, this group critically reflected<sup>†</sup> upon three main considerations for the continued growth of the field: collaboration, hierarchy, and transparency.<sup>1</sup> Three series of probing questions were posed based on discussions, collective experiences, relevant extant theory, and reference to relevant empirical literature. A dialogue ensued, culminating in the production of this collaborative perspective article. The questions were:

1. On collaboration. Keeping in mind education, practice, and both academic and industry research, what would an ideal

realization of collaboration in audiology look like to you? How would this benefit the field of audiology? What might facilitate this vision becoming a reality?

2. On hierarchy. How might we begin to redistribute power across educators, practitioners, and academic and industry researchers? Is a model like the medical clinician-educator-researcher feasible in audiology? Would this be of benefit to the field of audiology? Why/why not?
3. On transparency. In education: How might we, as educators, be more transparent about our biases and our hidden curricula? In research: Are we currently falling short of transparency in research practices? If so, what are the ethical implications of this shortcoming? Is there a model of transparency that would benefit the field? Is such a vision possible and if so, what might help it come to fruition? In practice: Do we need to attend more to transparency in practice?

In this article, we share individual responses (presented as direct quotations) and resultant shared thinking that developed through this dialogic process.

## ON COLLABORATION

Interprofessional collaboration and interprofessional education are currently receiving significant attention in the health professions literature.<sup>2-4</sup> It is generally acknowledged that interprofessional collaboration must exist to best serve patient needs, especially when these needs are complex.<sup>2,5,6</sup> For example, in the case

\*Dialogic, in this article, is used to refer to the genuine give-and-take participation and consideration of all members of a conversation, in which all participants' contributions are valued equally.

<sup>†</sup>Critical reflection, in this article, is used to refer to critique of assumptions, making the taken-for-granted problematic, and raising questions regarding the validity of existing power relations. Critical reflection focuses on systemic and social issues and draws from multiple perspectives.

of a child with both autism and hearing loss, a team of professionals from both healthcare and education would be required to optimally support the family and to promote the child's development. However, these practices do not always occur as an optimal, seamless process.<sup>7</sup> In fact, there is an identified need to study why such practices are challenging and how to facilitate them.<sup>2</sup> One proposed reason for these challenges is the disparity in the discourses<sup>‡</sup>; continuing with the example of the autistic hearing impaired child above, disparate discourses rule healthcare settings versus educational settings. For example, a clinician's recommendation to the education system might be poorly matched with the education system's policies and procedures. In the absence of mediating between the distinct discourses, even best practices may fail to provide optimal services to this child with complex needs.<sup>8-10</sup>

Drawing from the example above of how difficult truly collaborative practice is to achieve, the authors of this article envisioned the challenge for collaboration between educators, practitioners, academics, and industry researchers and developers. These roles, in the field of audiology, also exist within different discourses. As a group representing each of these roles and living varied discourses, we explored the challenge of collaboration.

First, we envisioned a future of true collaboration involving the patient/client, other fields (beyond audiology), and between academia and industry:

No one is more aware of the impact of hearing and balance disorders on the patient than the alert clinician, besides perhaps the patients themselves. In a perfect world, the observations of patients and clinicians would serve as a fertile source of ideas and information for research to be conducted in academia, industry, and in the clinic itself.

<sup>‡</sup>Discourse, in this article, is used to focus on the nonneutral role of language (e.g., evidence-based practice is not a neutral discourse, but carries with it certain assumptions about expertise and knowledge). Discourses constrain and make possible what we talk about, think about, and how we talk and think. Discourse is tied to power and constitutes what we consider to be valid as knowledge.

Clinicians and patients are often seen (and referred to) as "end users" or consumers rather than contributors or generators of research questions and creators of new knowledge in their own right.

More deliberate and active involvement from clinicians in research would increase the capacity to perform translational research.<sup>11</sup> Clinicians would become stakeholders in the research process, rather than simply being viewed as consumers of information. The benefits to clinicians include further engagement and education, whereas the benefits to researchers include increasing the impact and relevancy of their research to clinical practitioners and learning about how the findings from their research are being (or not being) implemented by practitioners. Through active involvement in all phases of research, clinicians would be more engaged and consistent consumers and creators of knowledge.

In an ideal model, researchers, both in academia and industry, would actively seek input from practitioners on research questions. Involving clinicians earlier in the research process would enhance the perception and value of research by clinicians because the research would be more clinically applicable and relevant. One of the factors that limits the integration of research findings into clinical practice may be clinicians' perceptions that academics may at times be unaware of everyday clinical realities.<sup>12,13</sup> Although some models of inclusion use clinical audiologists as data collectors, a more progressive model would involve the clinician as a partner with practical knowledge to contribute to projects. Abandoning the top-down model with the researcher at the top allows for the bidirectional sharing of information where all individuals have the opportunity to share and learn information.

In such a vision, clinicians would not only be part of the research process in generating ideas for research questions or in collecting data. There is a danger in "using" clinicians in

this way in that we may perpetuate the model of researchers *providing* knowledge to clinicians. Rather, we envision a bidirectional model that truly engages and values clinicians in the research process as equal producers of knowledge whose role may span from research question formulation, to feasibility testing, to critique and review of design and dissemination, and eventually to implementation.<sup>11,14</sup> We can also look beyond our own field altogether:

It may help us to look outside of audiology to other fields. Research within audiology can tend to be very insular or secluded from other fields that may have relevant existing knowledge. For example, I recently reviewed an article for publication and the authors had developed something “novel” for audiology. However, by doing a quick literature search, I came up with several articles from related fields on the same concepts. These articles were not referenced in this paper. I have come across this problem more than once, as have some of my colleagues. Does audiology feel, as a field, that it needs to “reinvent the wheel,” or are we simply not looking to other complementary fields often enough? In other words, are we not collaborating outside audiology?

In writing this article, we drew not only from the breadth of perspectives represented by the authors, but also from two authors’ deep engagement in the relevant empirical and theoretical literature *across* the health professions as well as one author’s immersion in a medical and health professions’ education research environment. In line with the vision of collaboration inclusive of clinicians and patients in the research process, is the vision of audiology researchers drawing from basic science and/or social science researchers. That is, benefitting from the knowledge of others in certain domains rather than isolating ourselves. A final piece of the collaborative puzzle would see continued but more functional collaboration between academics and industry researchers.

An ideal realization of collaboration in audiology would begin in the clinic, with

audiology academics collaborating with clinicians and patients driving research through identified gaps and needs in practice and products. From there, audiology academics would collaborate with basic science partners (psychology, psychoacoustics, hearing science) to facilitate understanding the nature of the gap or need. Subsequent collaboration between audiology academics and industry to develop a test, intervention, or processing strategy could be done to address the identified gap or need. A final step of collaboration between audiology academics, clinicians, and industry partners would allow opportunity for multiple perspectives on how to best assess a given test, intervention, or strategy.

Though arguably beneficial or necessary, the nature of academia-industry relationships requires attention. Explicit role delineation and dialogue within the field about how to most effectively foster these collaborations may result in a more ethical and productive approach to these partnerships:

In some respects, competition in our field is at an all-time high. This inevitably leads to researchers guarding their ideas at the expense of considering different perspectives or contributions from other experienced researchers (who may be independently investigating a similar question). Due to the challenge of acquiring funding from academic agencies, academic research is often forced to rely on industry partners to embark on research projects. In many cases, the nature of the research question or project has to be of mutual benefit. The goal for academics is publication and for industry it is often efficacy/effectiveness/endorsement. Given the current framework of some relationships, the technology or technique being investigated will be proprietary and often subject to nondisclosure agreements. The nature of these relationships, while necessary for the protection of those involved, may also formally restrict the opportunity for genuine collaboration.

The challenge that we face, of course, is to ensure that research is kept separate from

development: That is, we need to continue to ask and answer questions about the systems, disorders, processes, and perceptions that make our work necessary as clinicians and researchers, not simply work to develop the next great marketing story. To follow this process most effectively, we must work together, avoiding the stratification of our field by place of employment or preconceived and outdated notions of what and who is “important.” We are all able to ask important questions and make important contributions to audiology, and we should avoid assumptions about the quality, relevance or impact of each other’s work based upon our position in the current hierarchy of the field.

I feel that true collaboration will benefit the field of audiology equally critiquing and respecting the knowledge presented by all members of the field. At times, we may see that the opinions of individuals in prominent positions are given more weight than the evidence presented by others.

As expressed in some of the responses to the questions about collaboration, the hierarchical nature of relationships can pose challenges to a truly collaborative culture in our field. Next we explore the existing hierarchical relationships in audiology and how to reenvision these relationships in a progressive way.

## ON HIERARCHY

Although perhaps implicit in nature, there is a sense of hierarchy in our field. This hierarchy may differ slightly depending on one’s specific context of practice; however, from our array of perspectives, we position the well-established academic researcher at the top of the hierarchy. Despite the fact that most of the authors are pursuing academic careers, we envision a future in which the hierarchy is flattened. We suggest that even in research, there is a need for clinicians to participate with equal value, as clinician-researchers.<sup>11</sup> Further, we need to critically consider the language we choose in discussing research and practice, so as not to further perpetuate the dichotomy and hierarchy

between researchers and clinicians by referring to researchers as the experts in the discourse of evidence-based practice.<sup>15</sup> We draw from the profession of medicine, in which many physicians are deeply engaged as clinicians, educators, and researchers simultaneously, without as prevalent a hierarchical structure as we witness in our field. In North America, there are funding opportunities for clinician-scientists and variations on this arrangement. However, these opportunities are often reserved for medical doctors. In the United States, Au.D.-Ph.D. programs have emerged and there are indeed leading clinician-researchers in our field. We support these efforts and believe that it is through genuine engagement of clinicians as leaders in research, not merely as participants, that the union of practice and research may begin to strengthen.

The system is not designed to allow audiologists the time, space, and/or funding to easily participate in research. We need high-caliber clinical research to be respected and possibly expected. The inability to participate in research and working in a system where the researcher is the expert may lead to relegation of the audiologist to the role of a technician where they are not valued in their contribution to the development of knowledge in the field. In addition, I would suggest that many clinicians do not identify themselves as educators even when they are indeed educating students. They may supervise and mentor students but I do not believe they feel they can explicitly identify with the title educator. In medicine it seems that educator is part of the package of being a physician, especially in their training when educating those in the cohorts below is part of their clinical training (e.g., resident teaches clerk). Part of the “solution” may be to reevaluate and reshape our view of the educator in audiology, making it a part of our identity. By placing more emphasis on the importance of clinical educators inculcating this role into the audiology identity from the beginning during our audiology training and promoting this responsibility to education through our governing bodies and providing training/workshops—if clinicians and researchers share the role of educator—this

may begin to flatten the hierarchy. We could then move toward valuing the role of each in the training of future audiologists, valuing the expertise of clinical educators, and seeing the value of their expertise in research.

I think the medical clinician-educator-researcher model could be feasible in audiology. However, I think a necessary first step is to create a professional, or field, identity. I think many practicing clinicians could already be described as clinician-educator-researcher, but are either unaware that such a thing exists or are too humble to identify themselves as such. Many clinicians act as educators through student supervision, but are also educators of the public and their patients. Clinicians also actively engage in their own research, perhaps not on the same scale as an academic or industry lab, but on an individual or small-group level with their patients.

While the clinician-educator-researcher model may be feasible in audiology, I think caution must be taken in order to move toward a flatter form of collaboration. In developing more opportunities for clinician-educator-researcher roles we do not want to unintentionally place those who wear all three hats at the top of a hierarchy. There are valuable academics in the field of audiology who are not clinical audiologists or may no longer have the time or opportunity to practice clinically. For some researchers in industry, there may be less opportunity to engage in education. There are of course numerous clinicians whose knowledge would be of great value to research and education, but whose practice environments leave little time to engage in formal education or research. For these reasons, developing a multidirectional platform of “evidence” where all contributions and contributors are valued will be challenging in the field of audiology—but I do believe it is possible. By being conscious of possible hidden curricula in which academics might unconsciously devalue any knowledge not stemming from academic institutions, I think the value of clinical knowledge can be raised and appreciated. If we could begin to use

constructive language and avoid dichotomous use of language that divides clinicians from researchers, we could subsequently flatten the hierarchy across the field.

The possibility of creating a space for the clinician-educator-researcher is intriguing and not without precedence in other health professions.<sup>16</sup> However, a few cautions arose in our dialogue including the importance of not simply placing this jack-of-all-trades role at the top of a new hierarchy.

The idea of a person who would be able to fulfill all of these roles exceptionally is counterintuitive, simply because such a proposal diminishes the unique contributions of each individual to the overall process. In my opinion, one of the biggest challenges in our field is that we have individuals who feel that they can fill all these roles without support from others. A team approach that values the individual contributions of many people working together would force researchers to acknowledge their limitations and seek collaboration when exploring new ideas or pushing the boundaries of their own research ideas.

Taken together, these perspectives suggest a place for the clinician-educator-researcher not as the new expert or gold standard for the field but to foster collaboration, maintain a level hierarchy, give voice to audiologists in all roles, and facilitate better appreciation and understanding across all three roles. In essence, the multirole individual could act as a knowledge broker, bridging between silos.<sup>11</sup>

On a final note regarding hierarchy, we draw from critical theory that states that it is difficult for those living in a privileged position within a particular discourse to *see* that they are in a privileged position or to recognize the discourse.<sup>17,18</sup> It is only through dialogic activities and critical reflection that we may *begin* to see our own privilege and the disempowering influence of the systems we exist within and language we use.<sup>19</sup> This consideration does not dismiss the knowledge of those who have worked hard to be in positions of power; however, it emphasizes the importance of consideration for change.

Unfortunately, researchers who are established within the current model might be hard-pressed to take an active role in such a significant paradigm shift, despite the potential benefits. The hierarchy in our field is self-perpetuating because new researchers are trained in the current model and rejecting specific practices or challenging established ideas could result in negative career consequences. Rather than continue to perpetuate the current system, new researchers should focus on creating their own career model based on mentorship and collaboration. The next generation of leaders in the field must commit themselves to a new model by being open, even welcoming, to criticism from clinicians and fellow researchers. Leaders must commit themselves to a different type of mentorship than what has traditionally been the standard in our field. We must commit ourselves to moving the field forward, rather than simply moving our own careers forward at any expense.

## ON TRANSPARENCY

### In Education

Hidden curricula exist in arguably all education or training programs.<sup>20</sup> Although our course outlines, program mission statements, or philosophies of teaching may not explicate our underlying (at times unconscious) values, these values may surreptitiously seep into the consciousness of our students.<sup>20</sup> To turn our hidden curricula into generative objects, as educators/preceptors, we need to first recognize that we have assumptions as a first step toward moving beyond them. Thus, transparency and dialogue about issues of practice and the professional identity we hope to foster is critical. For example, if a preceptor makes a casual remark about the quality of nonaudiologist hearing health practitioners, what message might the student take away? How might this shape the students' professional identity? The message that is delivered in this interaction is part of the hidden curricula and contributes to professional socialization processes significantly. In coursework, if an instructor exclusively uses didactic lectures and recall-based assessment to assess students' knowledge,

what type of knowledge is instilled and what type of value for learning is fostered? This type of pedagogy has been described in the literature as the "banking model" of education.<sup>17</sup> The banking model of education results in missed opportunities to foster: critical thinking and problem-solving abilities in future clinicians, a value for lifelong learning, critical and ethical consciousness, autonomy, and community of practice.<sup>19</sup> Instead, this model instills conceptions of knowledge as a static entity to passively receive rather than actively create in a lifelong learning process.

If we do not strive for transparency in our professional and education practices, we risk perpetuating predominant messages that may be detrimental to our growth. A strong sense of professional identity is needed and the hidden curriculum certainly has the potential to influence this identity in positive or negative ways (see "The Education and Socialization of Audiology Students and Novices" by Ng et al, this issue).<sup>21</sup> Thus, even as experienced educators, practitioners, or researchers, critical reflection upon espoused values and taken-for-granted assumptions offers us a way to ensure we do not pass unfavorable personal biases on to future generations of audiologists. We need to consistently ask ourselves questions like "What message does this action/statement send?" "Whose agenda does this approach/message serve?" and "What evidence exists for the beliefs that I am perpetuating?"

In striving toward transparency, we considered the challenge of transparency in education in terms of critically questioning our educational practices. If we are not aware of our own assumptions and biases, it is impossible to be honest with our students.

It would seem likely that we all have been guilty at one time or another of allowing our personal biases and beliefs to creep into the transmission of knowledge from educator

<sup>17</sup>The banking model of education, first explored by Paulo Freire, posits that the predominant education system is one in which teachers are seen as the holders of knowledge and students are seen as the receptacles into which knowledge is deposited. This model is suggested to be problematic yet is perpetuated through the ages as a result of dominant discourses, hegemony, and those in power.

to student. A relatively recent example springs to mind: an audiologist colleague and a student were working with a patient who had obtained hearing aids in a nonaudiologist practice. The clinician suggested to the patient that her difficulties with her current hearing aids would be solved quickly and easily now that she was working with a doctor of audiology. It struck me that although I knew this clinician to be highly competent, and I believed that the patient's concerns would be quickly addressed, that this would occur because the clinician had a great deal of knowledge and experience and was going to approach the fitting and fine-tuning process from a perspective that incorporated both scientific and holistic interventions. On the surface, it would seem that no one was hurt in this exchange, and the patient ended up satisfied in the end. However, the implication that the solution lay in the clinician being an audiologist suggested to the student that all that was required to be successful as a clinician was to get their degree and be an audiologist. It is clear that this is not the case. We must aspire to more than this—we must be careful to instill and develop a respect for assessment, process, basic science, clinical knowledge, and assessment of outcome, rather than promote the idea that a title will create success.

To achieve transparency in education, I think an important first step is being honest with ourselves. Honesty in terms of background, motives, and aspirations. I think a lot of this relates back to the idea of a professional identity. When there is no cohesive and strong professional identity in audiology,<sup>22</sup> we leave the door open for nonproductive personal bias when engaging students in topics relating to hearing health care. Acknowledging our own limitations or vulnerabilities might facilitate transparency or even reduce the degree of hidden curriculum. As an example, I often wonder if some of the turf war between the various hearing health care professionals stems from a fear that the other professionals are just as good, or even better, at a given aspect of hearing health care. Perhaps if we had a professional identity

that could create pride or confidence in ability more so than an advanced degree or designation, we could reduce the undercurrent of “us versus them,” which is problematic when our own profession has many of its own problems to address (e.g., professional ethics related to manufacturer-clinic relationships). If audiology education could move toward shaping knowledge gained through experience and equipping students with the ability to evaluate knowledge in all forms and origins (academic, client-based, clinical, industry), rather than the usual didactic approach of an “expert” at the front of the room, perhaps bias and curriculum would naturally be less hidden.

As teachers, our goal should be to acknowledge our biases and the limitations of our own knowledge. Too often, the difference between “expert opinion” and empirical data are blurred for our students. Being open to challenges from students and encouraging students to question current practices in a critical manner will help to limit the perception that the professor's knowledge is infallible and concrete. Open discussion and disagreement should be an expectation of our students.

### In Research

Although each of the authors identifies as an audiologist, each also has at least a foot in the research world. Thus, we acknowledge that we may be privy to the nature of industry-funded research in a way that a non-research-based practitioner may not be. Again if we look to other professions, we will see that the interfaces between industry and academic research have been prioritized as critical areas for consideration and regulation.<sup>23–25</sup> Certainly there is an awareness of this potential area for concern within audiology as well.<sup>26</sup> We have acknowledged that relationships between industry and academia are, in many ways, beneficial and productive. However, there is room to improve in our accountability in these practices. There is a need to continually monitor our practices as the consequences of *not* attending to potential conflicts of interest and ethical dilemmas are too great.

One strategy to engage in self-regulation of industry relations is to rise to the challenge

of transparency. This transparency extends beyond the cursory acknowledgment of funding support for industry-sponsored research. We explored this crucial challenge:

In industry the obvious goal is to demonstrate the superiority of one's own product and studies/experimental setups are often designed to showcase the advantage of a particular feature or technology. In academia, on the other hand, researchers may also have biases as well as, at times, a less intimate understanding of the technologies under evaluation. In academic papers, the assumptions about the technologies as well as biases may or may not be openly discussed while interpretations of results may be taken as fact by the reader. As a field we hold the opinions expressed by academic researchers in high regard and sometimes as fact when they are simply opinion (at times well-informed opinions, but still opinion). This is not to devalue expert opinion, but to remind our field that we all need to be critical consumers of information, recognizing the difference between opinion, data, and marketing, reading the papers published by researchers in industry, rather than the message taken from the marketing departments, and comparing that information to the opinions published or voiced by independent researchers.

There is an opportunity to improve transparency in current research practices and it relates directly to the hierarchical nature of the field. To be positioned at the top of the hierarchy, investigators and their research must appear to be independent, academic, and the work of the investigators' laboratory. Research that is not independent or that has no illusions of being free of bias (i.e., industry research) is often dismissed as inferior or untrustworthy. The reality is that a lot of research that is published could be consciously or subconsciously biased too due to industry-partnered academic research. We have an ethical obligation to be transparent about the nature of such relationships. This transparency may in turn level the playing field between academia and industry for improved collaboration. Industry may feel less obligated

to secure academic partners for the main purpose of validating that their technologies work (as they are often capable of running their own field trials) and may instead see value in financially supporting basic and generic research rather than product validation (this model exists in other fields, for example veterinary medicine). Furthermore, if academic investigators were to engage in such transparency, those reading their results and conclusions or attending a presentation could apply the necessary critical appraisal of the content. To achieve transparency, we need accountability and honesty. To achieve accountability and honesty, we need a flattening of the hierarchy. Power is inherent in a hierarchy and in the current hierarchy clinicians and students may regard all research as fact when it too is fallible. Although EBP (evidence-based practice) establishes the importance of research evidence, the hierarchy still fosters a sense of naive trust of researchers, and we must take that responsibility seriously. Value must be given to knowledge generated from multiple sources. When academic, arms-length, independent research is viewed as the gold standard and the only knowledge that counts, it creates an academic-led hierarchy but also imposes pressure on academics not to engage in completely transparent industry-affiliated research. Acknowledging the value and expertise in all facets of the field of audiology could serve to flatten the hierarchy and foster true collaboration.

As a field, the intertwining of research and industry is not always openly acknowledged, leading to the perception of bias. Partnerships between industry and academic researchers are essential due to funding constraints and the rapid advancement of technology in our field. However, researchers who receive funding from or serve on scientific advisory boards should be free to publish and disclose their findings regardless of the outcomes and potential implications for products. Although this may seem counterintuitive to the current goals of a partnership between industry and independent researchers, improved transparency and independent validation of findings will lead to an improved

perception of manufacturers' own research data, if those findings are replicated or extended independently. In cases where technologies are invalidated by research data, industry should view that as an opportunity to improve the technology or change directions, rather than something that needs to be suppressed.

Some might argue that a more open and accountable model of collaboration between industry and independent researchers will never occur because of the financial implications of negative findings outweighing the potential benefits of supporting independent research. However, moving toward research questions that are not product-specific can help to minimize the risk for industry and the perception that the purpose of the study is product validation, rather than testing scientific theories.

In terms of improving the transparency of relations between academia and industry, perhaps we return to the need for role delineation as mentioned in the collaboration section of this article. We also encourage consultation of the literature from other professions, which have already taken steps to improve these relationships.<sup>23–25</sup> Minimally, we need to critically consider the ethics of all partnerships including the rights of clinicians, patients/clients, and the general public to know the sources (including funding sources) of knowledge. We need to continually strive to maintain a standard of honesty, integrity, and rigor at all levels of research, independent or partnered. We need to earn the trust that is instilled in us, whether we are academic or industry researchers, and not take it for granted.

Finally, although we will not comment at length regarding transparency in practice, there is certainly a similar need for transparency and ethical consideration in audiology practice, where our clients trust us.

I believe there is a lack of transparency in terms of the patient/client. Perhaps most audiologists know that hearing aid manufacturers own audiology clinics and fund univer-

sity-based hearing aid research, but the general public is not always privy to this information. A similar problem faced medicine and pharmaceutical companies; however, the problem is acknowledged and active steps to address the challenge are well underway. We need to join other professions in an effort to improve the ethics and transparency of our practices.

## CONCLUSION

In responding to the questions that arose from our experiences and reading relevant literature, we have likely created more questions than answers. We acknowledge that we are limited by our own perspectives and may have demonstrated some naivety in our visions. But perhaps some level of optimism is valuable to a field in challenging times. We did not always agree with one another, and expect many readers of this article to disagree with some points posited in this paper. We suggest that this is a helpful outcome of dialogue that is thoughtful and well-informed. We do not presume to have solved any problems through this exercise. However, we hope that we have demonstrated the generative potential of bringing together multiple perspectives within a dialogic, critically reflective framework. The aim of this endeavor was not to be negative but to question the way things are and to imagine the way things could/should be. It is too easy to fall into the self-perpetuating cycle of the way things have always been.

Throughout the dialogue, we often returned to the need for equality among all stakeholder groups in our field. *We do not mean that everyone should play the same role in all areas of audiology, but rather that all roles, whether clinician, researcher, or clinician-researcher should be equally valued.* Dialogue and critical reflection engaging multiple perspectives, including the literature, offer an avenue for the growth of our field. We also hope that future dialogic pieces, informed by a deep familiarity with the relevant literature and theory and framed within a critically reflective format, will emerge as audiology begins to ask and answer the difficult but most important questions for our united future.

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