Perception Problems

when I learned about the subtle, but significant effects of confirmation bias, most of my confusion about how I could not hear something properly was resolved. But even after it was pointed out to me that I was not hearing something correctly, why did I continue to produce the same mistakes? That is, why was just knowing about the problem not enough to solve it? Phil told me to not think about it and just do what he told me to do. The most common verbal direction he provided for working through this problem was when he would put his face about a foot from mine and yell, as I was playing, "Move your goddamn finger!" I interpreted this as his way of getting me to ignore what I thought I was hearing and take action with something that would eventually force me to hear a difference. In this particular instance, he was forcing me to direct my focus on the most effective way to correct the timing error by doing nothing but moving my finger. It would eventually work, but what made it so difficult for me to deal with this timing mistake and never again miss hearing the difference?

During a recent L.A.Times interview, the acclaimed violinist Itzhak Perlman acknowledged the existence of such a problem:

"Well, look, to teach it's obvious you have to listen. But when you play an instrument, because you're involved physically, sometimes it interferes with your ability to listen correctly. So the challenge is to listen and not be affected by how you feel but by how it sounds. And that's kind of tricky. You might think, 'Oh, so what's in that?' You can hear so you can hear how it sounds.' Not true."¹

After years of wondering about this phenomenon, I decided to further explore the topic and found a possible answer in the Colavita Visual Dominance effect. Experimental psychologist Charles Spence of the University of Oxford found that,

"...participants sometimes fail to respond to auditory targets when they are presented at the same time as visual targets, despite the fact that they have no problems in responding to the auditory and visual stimuli when they are presented individually."²

This means that the visual input of evenly spaced notes on the printed page could trump auditory input that might differ. By extension, this means that our brain will "trick" our ears into thinking they heard what the eyes saw. If the little dots on the page are evenly spaced and that's what I want to hear, it's likely that will be my perception, especially when I have not yet trained my hearing to operate independently from my vision.

¹ L.A. Times Jan 8 2018, Sunday conversation: Itzhak Perlman talks about the art of listening, YouTube and his friend President Obama

² Spence Charles. (2009) Explaining the Colavita visual dominance effect. *Progress in Brain Research.* 176:245-58