

spends several hours getting to know the student and how he or she processes information. Next, he explains how to make a sharp clicking noise with the tongue. Then, they move on to “panel exercises,” which involves the student detecting panels placed around his or her head. “This is the stimulus sensitization phase, where the brain is hooked into the sensation of echo stimuli,” explains Kish.

There are two ways that people who are blind can use echolocation to navigate environments. One is to use clicks to maintain orientation—that is, to identify surroundings and one’s position in relation to those surroundings. The other is to use clicks to target a specific object—to identify the backboard of a basketball net to make a shot, for example.

According to Kish, active echolocation is always more effective than passive echolocation. “You want a sharp tongue click, and you want to be scanning with your head, much as people scan through eye movement,” he explains. “You also want to vary the amplitude of the click with the requirement of the situation, generally louder for noisy environments or for targets that are further away.”

Dewald van Deventer, 25, is one of Kish’s echolocation students. Even before

van Deventer was aware of the technique, he used the skill passively. “I used to think I could see shadows, but now I know that I was actually hearing by passive sonar,” he says. “I would use my voice or tap my cane on the floor.”

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Van Deventer, who is South African, recently invited Kish to his home country so that Kish could teach him the technique. Although van Deventer found that learning echolocation is a process that requires constant practice, he is astounded at how quickly he has picked up the skill. “My first day, I doubted myself a lot, but I was able to count tree branches and poles,” he says. “I continue to surprise myself every day.”

As van Deventer, who lost his sight at

10, continues to improve his skills, he hopes to one day offer workshops—especially for children—in South Africa. “When I was a child, I couldn’t do the things other kids do, like go visit friends whenever they want to, or just escape the house by riding a bicycle, that type of stuff,” he says. “I would like to see blind kids and teenagers have more independence.”

Almost all people with vision disabilities can benefit from using echolocation, according to Kish. “It’s as useful as seeing is for sighted people,” he says. “It takes time and effort to learn, but most people develop a functional level of proficiency more quickly than it took most sighted people to learn to see. Just keep at it until your brain starts getting the images.”

Kish hopes that the skill can be transferred to the sighted world, too. “I see it helping open up new realms of possibilities in human perception, not only for blind individuals, but for anyone who wants to learn to understand their environment and their relationship with the world better. We are all narrowly focused in our own presumptions about the world. We need some serious shaking up.”

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