

I'm not too sure when cocktail parties started, but the now popular "cocktail" was defined in the early 1800s, so let's assume they've been going on for 200 years or so. And I'm betting that, whether it was gold miners at a martini party in San Francisco in the 1860s, or a group of friends sampling Margarita Sames's exotic concoction at her 1948 Christmas party in Acapulco, people have always had trouble understanding each other at these events.

In fact, "the cocktail party effect" is considered a scientific term, first written about extensively in the 1950s. You know how it goes. When there are multiple talkers and background noise, you attempt—and sometimes are able—to attend to the talker you consider most important or to something else that draws your attention. Audibility, of course, is a key player here, but how we do this is a bit more complex than just "hearing" everything. And what happens when the listener has a hearing loss, distortions are present, and some of the audibility is lost?

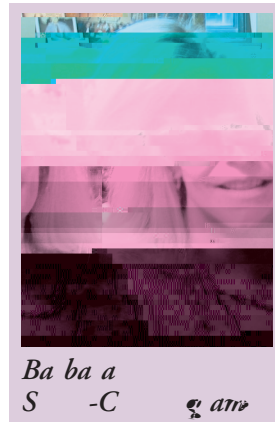
To learn all about how we understand speech in difficult listening situations, it seemed only appropriate to bring in an MIT-educated *electrical engineer*. But before you grab your slide rule, understand that this is an engineer whose research includes studies of auditory attention, sound source separation, spatial hearing, cross-modal integration, neural coding, and perceptual plasticity. **Barbara Shinn-Cunningham**, PhD, is Associate Professor of Cognitive and Neural Systems and Associate Professor of Biomedical Engineering at Boston University. She also is an instructor in the Harvard/MIT Health Science and Technology Program and an adjunct professor of the Naval Postgraduate School. She is the recipient of numerous awards, including fellowships from the Alfred P. Sloan Foundation, the Whitaker Foundation, and, most recently, the National Security Science and Engineering Faculty Fellows program.

Barbara tells us that her interest in helping listeners with hearing impairment was sparked a few years ago when her elderly uncle visited at Christmas—and immediately removed his new high-end hearing aids when he sat down at the dinner table. When not working, she tries to get her husband and two teenaged sons interested in auditory perception by making them listen to her play the oboe. Fortunately, she put down her oboe just long enough to tell us all about this so-called cocktail party effect, and most importantly, how it impacts our patients. Cheers.

**G M ELLE**  
Page Ten Editor

## “I want to party, but my hearing aids won't let me!”

*B Ba ba a S -C* *g atm*



**1** I hear that you're doing research on hearing aid use and benefit. Is this true?

*wants!*

**2** Great! Maybe you can tell me why so many of my patients complain that their hearing aids are useless in social settings, like at a party. What's going on?

*selective attention.*

**3** But I know that I fit my patients' hearing aids well. All those competing sources should all be audible! Isn't that good enough?

**4** Wait a minute... What do you mean by "sparse"?



1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

How do people usually select which object to listen to?

## 16 How do people usually select which object to listen to?

How do people usually select which object to listen to?