
LETTERS

The *ARSC Journal* encourages signed, typed comment on current issues and matter of general interest to Association members. Letters beyond 250 words may be edited to fit space. Letters can be sent to the editorial office.

To The Editor:

I would like to respond to the comments on unintentional stereo by Edward Young in the Fall 1990 *ARSC Journal* (Vol. 21, No. 2, p. 309) and David Diehl in the Fall 1991 issue (Vol. 22, no. 2, p. 268).

I commend Mr. Young on turning an open ear to unintentional stereo recordings which Brad Kay sent him, but I must disagree with his conclusions. He cites an examination of waveforms—I assume that he means an x-y display of the two channels on an oscilloscope—but this demonstrates only that two identical mono recordings have not been synchronized well enough to eliminate all differences. The synchronization requirement to reconstruct stereo is not that rigorous. Mr. Young also mentions that a mono recording played through two loudspeakers sounds more like stereo, but this does not prove his point either. Headphones help make the distinction between mono and stereo much clearer, as they eliminate spurious sound reflections and delays which confuse the spatial cues in the recording.

I commend Mr. Diehl for his search of his own collection for potential stereo pairs, but I have to disagree when he states that, “What is under discussion is not stereo in the sense of the 3-D sound heard in modern recordings. The intention . . . was to produce two virtually identical monaural masters.” Not necessarily! The intention was sometimes to produce masters with different balance, to afford a choice—check out the session notes on the Schnabel recording of the Brahms 2nd Concerto on p. 100 of the November 1987 *ARSC Journal* (Vol. 18, No. 1-3) or the major, audible differences between the two channels of Brad Kay’s reconstructed stereo of a 1932 RCA Victor Duke Ellington session. In the case of the documentary recordings which I am attempting to reconstruct into stereo, each network’s intention was merely to find a place somewhere on or near the speaker’s podium for its microphone. In one of my several recordings of the JFK Inaugural Address, there is a second microphone fully 75 feet from the podium which picks up crowd noise and ambience, as well as a slap echo from the PA system due to the long delay.

Speaking of slap echoes, Mr. Diehl states that time delays between two microphones only a foot or so apart and aimed in the same direction “would not add much of a sense of ‘space’ but would add an unpleasant slap echo at about 1596 Hz.” While it is true that each of the two channels by itself would sound very like the other, Mr. Diehl’s conclusions

do not follow from his premise. Granted, a recording with close microphone placement will demonstrate more stereo separation over headphones than over loudspeakers. However, the sound path difference between our two ears, like that of Mr. Diehl's hypothetical microphones, never exceeds one foot—yet the resulting delay, under one millisecond, is sufficient to cause localization of the sound image entirely at one side. Slap echo is inaudible for delays of one millisecond, or we'd hear one all the time by virtue of the spacing between our two ears. In fact, slap echo is inaudible for delays under about 30 milliseconds.

Mr. Diehl's supposed phase reinforcement peak from microphones a foot apart could occur only by combining the two microphone signals into mono and only if recording took place in an anechoic environment. One-foot microphone spacing can cause different room reflections to add or subtract fully from one another as low as 280 Hz, masking the phase reinforcement and cancellation of the first arrival signal and creating a vivid sense of space. Mr. Diehl, as far as I know, has never heard an unintentional stereo recording, and so he is describing a phenomenon which he has not experienced!

I do agree with Mr. Diehl's assessment of the importance of digital signal processing technology in the future of audio archiving, and that this technology may be useful in enhancing the differences between unintentional stereo channels. I also agree when he says of unintentional stereo pairs that "it should certainly be possible to verify their binaural character with modern signal processing (DSP) techniques." However, a set of headphones, variable-speed turntable, tape recorder and an amplifier with a stereo-mono switch suffice for this task. If the recordings are from the same take but NOT from separate microphones, and are combined into mono, a "phasing" whoosh will be audible as they go in and out of sync. If they are from the same take but separate microphones, there will be no whoosh, but the stereo image will "bloom" as the channels come into sync with one in each headphone.

Convincing people about unintentional stereo is difficult because synchronizing channels requires patience and practice. Unless you have seen and heard it done, you can easily find reasons that it cannot be done. Therefore, I have constructed an example using sources which anyone can verify: the two released versions of the Beatles' "Across the Universe," which have the same vocal track but different accompaniments. In this case, I have synchronized the two stereo recordings into quad—or you can have stereo using any pair of channels.

The source recordings are available on CD, but I've deliberately made my task harder by using LP releases, each of which was preceded by at least two generations of analog tape. Synchronization was by means of a variable-speed turntable, an analog tape recorder and a light finger drag on the capstan to keep the stereo image centered in my headphones. Synchronization is not perfect, as is evident when combining the channels into mono; the shared vocal track does show the telltale phasing whoosh. But the spatial image in stereo is steady enough.

I regret that I have had to cite three technical, psychoacoustic phenomena to make my case: 1) spaciousness resulting from the phase and amplitude behavior of audio signals in reverberant spaces, 2) the delay/localization curve for delays under 1 millisecond, and 3) the binaural fusion threshold at approximately 30 milliseconds. All of these phenomena are explained in the excellent book *Spatial Hearing*, by Dr. Jens Blauert (MIT Press) which I had the honor of translating from the original German to English. I recommend this book to anyone interested in pursuing an understanding of the phenomena of stereo sound. *John S. Allen, Waltham, MA*

To The Editor:

I was fascinated to read the article by Alexander Tikhonov (Fall 1991) on the early recording production efforts by Moll, Kybarth et al in Aprelyvka. As I read the article I wondered how the author acquired the photos and background material for this piece. Alas, on looking at the "Notes on Contributors," Tikhonov was not included.

Can you give us a few lines, belatedly, on Alexander Tikhonov and the source of his information? *Alan Warren, Philadelphia, PA*

The Editor Responds:

The *Journal* staff regrets this error. Please see this issue's "Notes on Contributors" for the information you requested. Georg Moll in Germany provided a great deal of information toward Tikhonov's article regarding his family's record company in Russia.

To The Editor:

In a belated response to the question about a discrepancy between the AS-Disc recording credits quoted in *Fanfare* and the entry in Edward D. Young's Koussevitzky discography in the *Journal* (Vol 21, No. 2, p. 311), may I suggest that neither list is completely correct. My source is the index to Kurtz Myer's *Index to Record Reviews* insofar as it identifies the singers active in Paris in 1950.

I would suggest that the singers are:

Janine Micheu, soprano

Solange Michel, mezzo-soprano

Georges Jouatte, tenor

Charles Cambon, bass

Anyone who thinks this is a doubtful way to solve the question need only look at published sources for any singers bearing the peculiar names found in both lists. The AS-Disc date is, of course, impossible—it was the middle of the Tanglewood season, where Koussevitzky was still head of the music school.

As for the Choral Symphony, I have a lot of information to offer in my promised addenda to my discography in Vol. 19, No. 2/3, but before I publish it I must have some access to the "Schreiber" performance on *Allegro* (my #39). (If not a cassette copy, at least the movement timings and/or the presence of matrix numbers on the pressings.) As for the first five pseudonymous issues mentioned on page 66, they all seem to be my #47! But that raises the question whether *Rondo-lette 126-127* is genuine stereo. Does anyone know? *J. F. Weber, Utica, NY*

To The Editor:

I write to add a bit more information and a correction to my letter in the Fall 1991 issue noting that a Simon Barere recording of Rachmaninoff's Second Piano Concerto makes an appearance in a documentary about the pioneer woman conductor Antonia Brico. It was not Joan (of course!) but Judy Collins who made the documentary, the full title of which is *Antonia: Portrait of a Woman* (Rocky Mountain Productions, 1974). I suspect that the Appian Recordings issue of the fascinating Barere performance of the concerto is indeed the same as the Carnegie Hall Transcription seen and heard briefly on the movie, but it would take a direct comparison (or inside information) to prove the point.

Also, a brief note of correction that failed to get into my review of Orfeus' historic Bavarian Radio issues: The majority of Stravinsky's own recordings of his works for Columbia have recently been reissued on 22 CDs (Sony SX22K 46290). Much of the set is the same set of performances that were in the 1982 Columbia centennial release, but there are a number of differences. *John Swan, Bennington College, VT*