

# SSW

# NEWSLETTER

Vol. 1 No. 2

February 1979

YES

The first issue of the SSW Newsletter asked, "A beginning?...." the SSW Newsletter--"Are you ready?" For the 10 people who met in San Francisco in Nov. 1978, the answer was a rousing, "Yes." Everyone seemed to agree that a newsletter can go a long way to help us remain up-to-date.

The Newsletter will come out quarterly and will present a variety of information submitted by the readership. Your contribution is needed to make this endeavor most worthwhile. We plan the following features: Cases: typical (verified); interesting; rare and strange ones for which you want some HELP! News: jobs; workshops; conferences. Bibliographies & Abstracts: articles and other publications; convention papers. Research: reports; plans; requests for assistance and coinvestigations. We also plan to have some issues devoted to one topic, such as: Children/L.D.; CES; Geriatrics; cochlear; etc. In order to stimulate research and contributions, notification will be made two issues in advance. (SEE pg. 5 ON THE SPECIAL ISSUE COMING UP).

It was not my intention to edit the first SSW Newsletter issue--but you know what happens to the best made plans. When the job fell into my lap I had no idea how much I'd enjoy it. So I volunteered to be editor for the 4 1979 issues. In the group of 10 people, protests were sparse, mutterings faint and all of the darts missed the mark. Therefore, I took that for a vote of confidence.

Please think about the work you've done with the SSW or CES tests and submit something that you think would be of interest, help or something you'd like to share or ask. Send it to the editor.

Dear Ackie

Dear Ackie:

The guy I live with got up this morning & threw his pajamas into the toilet instead of the hamper which sits close by. Should I give him an SSW test?

Concerned Audiologist

Dear Concerned:

You were very perceptive to notice this spatial or motoric reversal (unless he's trying to get rid of his P.J.'s or try-

ing to stuff up the toilet). Such reversals have been noted before: Do you recall the kid Bob Lukas tested who stepped out of the car before it stopped? That was quite a reversal. Don't forget that perfectly normal people will occasionally make a reversal of some sort. It is how often they do it that will tell you if he needs an SSW. Is this his form of a joke? Are you putting me on? Look lady, I'm busy enough without kooks like you sending me crazy letters.

ACKIE

P.S. Don't marry the guy honey, he sounds like imperfect merchandise.

## AUDIOLOGY POSITION:

With greater skills in central auditory testing by audiologists there has been an increase in the number of "neuroaudiological" positions. There is an excellent opening at the Cleveland Clinic. It is available immediately. If you are interested please contact:

Dr. Richard Nodar  
Cleveland Clinic  
9500 Euclid Avenue  
Cleveland, Ohio 44106

I still hear questions about correcting the SSW for discrimination errors. While no test or correction factor is perfect, all of the studies I've seen support using the C-SSW score. Those who use the raw score instead of the C-SSW do so on a theoretical basis rather than finding the C-SSW wanting.

Most central tests are invalidated by peripheral hearing loss or distortion(12). The SSW is useful in studying central dysfunction whether there is a hearing loss or not. The danger in not correcting the R-SSW is to confuse a peripheral disorder for a central one. In addition, so many people have hearing losses that it would severely reduce the number of patients who could be tested audiometrically for cerebral disorders.

Katz (7) found that C-SSW differentiated normal, cochlear, cerebral auditory reception (AR) and non AR (NAR) cases. These findings were supported by other studies (1, 6,7,8,11).

There seem to be 2 objections to the C-SSW. A. It is not proper to subtract error scores on a monosyllabic word test from a spondaic procedure. B. If cerebral distortion causes errors on the standard discrim test the correction would reduce the central effect.

A. (W-1 - W-22  $\neq$  R-SSW

- W-22).

There is no argument that monosyllabic (PB) & spondaic words are affected differently by peripheral distortion. However, the SSW is not a standard, simple spondee test. The advantage that spondees have over PB's is offset by the SSW method of presentation. There are at least 2 reasons why the SSW is more challenging than a simple spondee test:

1)The SSW is a complex dichotic procedure using 2 spondees. The words are competing and NC. The listener must spend less time analyzing the competing mono's because he must quickly shift attention to the other side. Thus a person with less than normal clarity for speech will be at a disadvantage in getting the competing word, even if he is able to understand the 1st one. There are many other challenges that are apparent between the SSW task vs. a simple spondee test.

2)Part of the spondee advantage is based on the familiarity of the W-1's and their homogeneous audibility. The SSW words seem less common, have more foils & probably are not as homogeneously audible. In a recent substudy on the SSW( 9 ) a group of college students in speech path. & audiology were asked to guess the 2nd word from the 1st  $\frac{1}{2}$  spondee. They correctly anticipated less than 1/3 of the words with even 50% accuracy. 17

of the words were not guessed by any of the 10 judges.

For many reasons SSW items are far more challenging than W-1's. It has become quite clear that spondees are easier than SSW's. Fortunately the SSW mimics the characteristics of W-22's.

#### B. R-SSW = W-22

The foregoing indicates that the SSW is more difficult than spondees. This section will show that it is equivalent to W-22's especially for normal and cochlear S's.

1)Balas & Simon(2) found the PI function for SSW items resembles PI-PB's. This finding was replicated in another study also involving normal listeners(10).

2)In studies with conductive & cochlear cases R-SSW & WDS have been remarkably similar. Means & standard deviations have been almost identical for the 2 tests & the correlations have been between .86 and .93(7,8,11).

3)Normal S's 11-60 yrs. consistently have normal(N)C-SSW scores. Cochlear cases usually corrected into the N category, but occasionally have Q or Mi scores. Dawson(5) tested a large group of cochlear & normal S's. All of the S's within the standard age range scored in the expected categories except for 1 congenital case with a S-N loss. It is quite

CASE(cont.)

the "reversal strip" but 23 reversals is typically supra sylvian. 3) There is the question of the effects of medication. I have tested sedated pts. & found reversals etc. which may have been drug induced. Possibly the medications could have increased her tendency to reverse. 4) It is important to reiterate that posterior temporal disorders are associated with MO/S scores and "posterior bias." Anterior temporal disorders are associated with N/Mi scores and "anterior biases." The latter was the case with this patient. 5) It would have been interesting to see if CES would shed light on the side(s) of dysfunction.

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LETTER TO THE EDITOR

Dear Editor:  
Would you believe that I don't know what the peculiar "forgive milkman" response is - which classifies me as a neophyte. My favorite response was "sheepshit bullshit." I also insist that you cannot say "Sunday shoeshine" if you are sober.  
B.K.

[Ed. note--B.K.: The response that you got was better than mine. I was talking about "forgive the milkman...ha (chuckle) ha(chuckle)."]

A SPECIAL ISSUE

From time to time we will have a special issue devoted to a topic like: CES, Reversals, and Geriatrics. The first special issue will come out in August and will deal with CHILDREN and LEARNING DISABILITIES. So far we have no material to print but are sure that the readership can come up with an exciting and informative issue.

You Can Help:

1) Have you tested a child or a person with a learning disability that you found interesting, valuable or strange? No doubt others would find it so too. Please communicate with the editor.

2) Have you any published or unpublished data that you would like to share which deals with the SSW and children/learning disabilities. It could be from an article a thesis, a project, a convention paper - or previously unreported results or observations. Please communicate.

3) Everyone/anyone:  
ATTENTION PLEASE -  
Would you believe that the single most important bit of information that we lack on the SSW is what is normal performance for children? This can be obtained in many ways but the best would be if we could develop a norm together. Would you test 5 normal children who would serve as part of the national sample? If 10 of you can send data on 5 kids we'd have a

great start, if 20 of you send data, of course that would give us considerable information. The unique part of such a sample is that it would represent a wide geographic distribution, many different audiometers, tape recorders, test chambers & testers. Another feature is that it would sample children from a variety of settings. If you will help by contributing 5 subjects to the sample in the next few months, please fill out attached form or write to the editor. This would be a very fine contribution. Ed Smith of the St. Paul Public Schools has sent us the first 5 kids to start us off. Now we need 5 more.

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PHILADELPHIA WORKSHOP

July 12-14, 1979  
Write: Elizabeth Protti  
Hear. & Speech Center  
Drexel Hill, PA 19026  
(215) 259-3800

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SWAP SHOP

Do you know of individuals with Organic Mercury Poisoning (Minamata Disease)? If you do, any help is appreciated. Contact:  
Floyd Rudmin  
350 Prince Arthur  
Apt. #D-1904  
Montreal, P.Q. H2X 3R4  
CANADA

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Do you know of individuals with confirmed cerebellar disease? If so send information to:  
Jack Katz

## USE/MISUSE....CON'T.

possible that even this 1 false positive has a true CNS disorder. Cafarelli & Nodar (4) studied patients with Meniere's disease using the SSW test. Their conclusion was that the C-SSW is the appropriate procedure for analyzing such cases.

The 2nd objection to the C-SSW ignores the use of score categories. The SSW categories were established empirically. The limits were set to maximize 'hits' & minimize 'misses' & false positives. Since the categories are based on C-SSW scores, WDS has been already taken into account.

In order to allay any fears regarding the use of the C-SSW score, 3 points should be made.

A. The SSW test is quite sensitive to various sites of brain lesion (1,3,6,11, 13). This includes the differentiation of AR & NAR disorders.

B. It is quite true that some brain disorders are associated with depressed WDS. Katz & Pack(11) found their AR cases had mildly depressed WDS and Mo/S C-SSW scores. The 13 AR cases had a mean WDS of 85% in the ear contralateral to the damage. The W-22 score was 89% ipsilaterally. The 17 NAR cases had 96% in each ear.

In AR cases the effect on the SSW is great and on WDS is quite small. Thus the categories work well in identify-

ing the central cases & differentiating them from peripheral cases. NAR cases have small affects on the SSW and almost no affect on W-22's. Thus, there is typically no change in the N or Mi category. Occasionally, the peripheral loss will bring the NAR case into the O category.

C. The acid test of the C-SSW score is to see if it can handle both significant hearing loss and AR disorder. A case was recently reported with a moderate S-N loss and an AR lesion(8,p.111). On the SSW he had a comb. TEC=Mo-0. The Mo score was in the ear opposite the brain lesion & the O was opposite the normal hemisphere. The C-SSW worked out very well in this and many other cases with both types of distortion.

There is a bonus for using the C-SSW. C-SSW helps to differentiate high from low brainstem disorders. This will be covered in a future column.

### References

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4. Cafarelli, D., Nodar, R. et al., SSW test results by patients with Meniere's Disease. Presented at ASHA, Chicago, 1977.

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10. Katz, J. & Olroyd, M. Unpublished study, 1965.

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12. Miltenberger, G., Dawson G., Raica, A., Effect of Sensorineural hearing loss on especially adapted speech materials. Presented at ASHA Chicago, 1977.

13. Winkelaar, R. & Lewis, T., Audiologic tests for evaluation of central auditory disorders., J. Otolaryngology, 6, 127-34, 1977.

### WYOMING WORKSHOP

Know someone who wants to take a Basic SSW workshop? (At present there are no Advanced ones set up.)

May 24-26, 1979  
Write: Ben Koperski  
U. of Wyoming  
Dept. of Sp. Path. & Aud.  
Laramie, Wyoming 82070

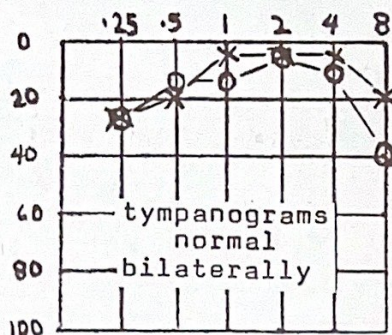
A 32 yr. old woman with a history (hx) of bilateral temporal lobe focal seizures was seen at Dept. of Otolaryngology, Hennepin Co. Med. Ctr. She was referred by her employer who claimed she did not hear well. The pt. said that it was his problem and not hers. She did admit however that she could "hear" but could not always tell what people were saying.

There was no hx of tinnitus, noise exposure nor family hx of hearing loss. At age 6 the pt. had fallen off a seesaw and was unconscious. She had difficulties in school but the seizures were not identified until she was 13. The seizures are not completely controlled by medication. There is an auditory component to these psycho-motor seizures during which the patient is reported to walk or dance. The woman has a history of psychiatric hospitalization and takes many drugs (e.g., Phenobarbital, Valium and Haldol).

The patient's record shows abnormal EEG activity bilaterally in the mid and anterior temporal regions, more so on the left.

Otological evaluation: ears clear and unremarkable, Weber referred to midline and Rinne, negative.

Audiological evaluation:



W-22 discrim at 2 S/N ratios: +10dB R=80%, L=90%; +5dB R=40%, L=60%. The SSW (list EE) was given at 50 dB above the 3-freq. sp. avg. The test was given REF. The 8 cardinal numbers were: 0 0 0 0 0 2 0 0, but there were 23 reversals.

Impression: based on the audiometric findings the pt. no doubt has difficulty in communication under noisy conditions, perhaps the right ear more than the left. It is not surprising that the C-SSW score was quite normal as the disorder was in the anterior-mid temporal region sparing Heschl's gyrus. (see USE/MISUSE-I, SSW Newsletter, 1, p.2, 1978). The reversals suggest that the patient has difficulty remembering the sequence of auditory information. On questioning she reported remembering a series of directions but not which ones should be done first.

Disposition: the employer was informed that the

pt. had a listening problem in noise. To avoid confusion he should instruct her in the quiet and when background noise was present he should be sure to face her to provide visual cues. The pt. was instructed to take written notes in order to maintain the proper sequence of her tasks.

Comment: the only SSW sign of CNS disorder & its possible site was the reversals. The S/N test demonstrated a figure/ground disturbance (which is usually associated with brainstem dysfunction). It is not clear how the various medications might have influenced the audiometric results.

Editor's comment--This is a most interesting case. 1.) It shows that CNS disorders can masquerade as "hearing problems." Without central testing the true problem might not have been identified and subsequent recommendations inappropriate (e.g., the employer might have fired her or sent her to the "shrink" and never instituted the simple, inexpensive and appropriate recommendations). 2) EEG is a valuable tool for general localization of cortical dysfunction. I wonder if frontal or parietal leads showed some abnormality too? The anterior temporal lobe is indeed within