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Dear Ackie on CAP

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A LITTLE BIT OF EXPERIENCE, UPSETS A LOT OF THEORY

by Dear Ackie

As you know, Dear Ackie has fielded many difficult questions over the past 12 years. However, none was more difficult than the one that I received recently from an audiologist who reads SSW Reports, but one who is truly devoted to my columns. While Ackie will make a stab at answering the question (because of her sense of duty, and yes, poor judgment), let it be known that no one person can respond appropriately and fully to this question (notice my humility and unpretentiousness). Dear Ackie invites you (actually, implores you) to make comments, suggestions, additions, subtractions etc.

Ackie feels that some people have placed a halo over a particular theory or two and have thereby, intentionally or not, erected a Berlin wall. While the wall keeps colleagues and students from "contamination", it reduces any meaningful dialogue that could enrich all sides. In essence, they maintain that there is no such thing as auditory processing, and if there is such a thing, it's not important. Perhaps, with a little bit of light that each of us can shed, the walls will come tumbling down. My avid and respectful reader writes the following letter.

Dear Ackie: [not bad so far]

I need your help (badly). A child who was doing poorly in school, was brought to me for a central audi-

tory processing (CAP) evaluation, by her mother. The youngster, Sally T. Scarborough, 8 years old, was having trouble in reading and spelling as well as in other subjects, but the school appeared to be rather unconcerned about her continued failure.

My tests showed the girl to have problems processing at the phonemic level, which helped to explain why she was doing so poorly in phonics. Sally was also deficient in blocking out background competition, based on her speech-in-noise test results, and supported by her teacher's report that she is easily distracted and tends to become hyperactive in group activities. The tests also suggested limited auditory memory, which can express itself as a reading comprehension problem.

When I interpreted the results, Mrs. S. was delighted (almost brought to tears) that someone finally understood what was going on with her daughter (and it was not simply that she was a slow child, as the school personnel seemed to imply). Sally's mother was eager to have my recommendations implemented at school. Of course, I was pleased too. I was hopeful that by attending to the child's auditory processing problems, she would be able to move ahead in a successful manner, at long last.

Our satisfaction and pleasure were short lived. Sally's mother brought my report to the special education administrator (a speech-language pathologist), who refused to

consider my findings and recommendations. He said that CAP tests are not reliable, and that, "they don't tell you anything". His reaction was specially violent when he saw those three letters, "S, S, W". It apparently ruined his day.

Well Ackie, I was flabbergasted by his reaction and by his apparent lack of responsiveness to the child's needs. My head has finally stopped pinning long enough to ask Dear Ackie, and other professionals who have had such problems in the past, what do I do?

(signed) Frustrated & Delirious

Dear Frustrated:

You should know that Ackie's first emotion was anger -- what an utter jerk he is! Do you suppose that's the best administrator that they could come up with? (I'll bet he runs the least costly department in the short run, but the most costly and extravagant department in the long run. In special education, a stitch in time ...).

Ackie actually screamed out loud, that jerk is truly temperamental unfortunately, he is 98% temper and only 2% mental). I added other unkind and, as yet, unsubstantiated statements such as, "he must have gotten his heart, soul and brains in a fire sale -- it was probably 3 for the price of one".

While the above rampage made Ackie feel much better, it did nothing to help Frustrated, Sally or even Bozo (I'll call him Mr. B for short). So Ackie harnessed her contempt for that ... that administrator and tried to channel her efforts into a more productive direction.

The basis of this problem is not new one to Ackie. She has often said before, "you don't know what you don't know, until you know it." Profound, no? Yes! I have to believe that Mr. B. would not knowingly hold back Sally from a successful educa-

tion, if he knew that auditory processing could hold a key to her problem. He obviously doesn't know how much progress a child can make when these problems are addressed. I am sure that he would love to have a successful program, if he only knew what we know!

Because of his strong bias, Mr. B. doesn't even know that there is something to learn. He thinks he knows all that he needs to know. He thinks that somehow this CAP stuff is subversive and he is going to keep his distance and protect his kids from it too (and that's that).

So Dear Reader, because we know what he doesn't know, it's incumbent upon us (somehow) to share our knowledge with him. We can't expect his professor (who convinced him that phonemes are meaningless) to teach him the importance of auditory processing, nor his colleague who scoffed as she told him that "auditory perception is a bunch of mumbo jumbo".

Frustrated and Delirious, my good man, it's your job and mine (mostly yours) to help Mr. B. to change his rigid stance. Who knows, you may turn an enemy into a friend. Here are some ideas that might assist you.

If Mr. B. provides therapeutic services, it will be much easier to get your message across. If he doesn't deal too much with the kids anymore, he may continue to feel comfortable with his theoretical framework. He will not have to ask himself challenging questions.

Recently, a speech-language pathologist who was trained in the "top-down" view of communication (e.g., communicative abilities are innate and don't have to be learned. That is, we pretty well know what is said to us without much need for hearing speech, especially phonemes), had reason to question whether in some cases there might be a "bottom-up" disorder that interfered with a

child's ability to learn language. The speech-language pathologist described the child in the following manner:

Sue is an otherwise bright child of 2 years and 11 months. She is enrolled in a special kindergarten program for youngsters who have delayed language. Sue has had a significant history of middle ear infections which began early in her life. Her cognitive, motor, social and self-care milestones are within age expectations. However, her language abilities, both receptive and expressive, are immature and disorganized.

Although Sue's oral language is quite limited, she expresses herself effectively in a non-verbal fashion, using gestures and pantomime. She responds to questions, non-verbally, as well, using jargon and appropriate prosodic patterns.

Sue is able to comprehend common object labels and can follow routine instructions, but is unable to differentiate words on the basis of their fine grained acoustical characteristics. For example, when she was shown a book about Mickey Mouse, to our amazement, she began to recite body parts. She interpreted "mouse" as "mouth" and therefore followed one of the class activities that she thought would be appropriate.

Generally, Sue is able to follow along getting the gist of what is said, correcting her faulty notions (due to fuzzy phonological decoding) as she goes along. But when she must respond before the material is entirely clear, she often chooses semantically related words (based on the context of what she heard) or chooses a word that has a similar "phonological shape".

Our intervention approach has emphasized Sue's strengths to help her develop better language skills. We use predictable and redundant language

forms to help Sue obtain a better understanding of the auditory input. Concurrently, we use rhyming, songs and sound games to increase her awareness of sounds in words and the ways sounds distinguish meanings.

* * * * *

This therapy approach turned out to be an excellent blend of top-down and bottom-up strategies, which were geared to the child's cognitive level and her developmental lags. Thus, because of this clinician's search for a suitable approach for this child and her background in speech acoustics, she was able to break a significant barrier in our profession.

Unfortunately for Mr. B., the self discovery possibility doesn't exist. He probably does not have to test his hypotheses in real life and probably he is not sufficiently open to new ideas to consider CAP as an explanation. Therefore, you could consider either a **FRONTAL** approach or a **LATERAL** approach. I'll describe the frontal one.

The frontal approach requires that you meet with him and that you maintain a level of diplomacy. But first you need to make sure of your facts, if you know his objections to CAP work you can outline your answers before hand (do you have any idea why the SSW is so abhorrent to him?). Once properly armed and practiced, it is time to make an appointment with Mr. B. (in his office, or over lunch), "to discuss the services that you offer" or "to provide some input regarding Sally" etc. Ackie might proceed as follows:

1. I have had very good success in working with children who have auditory processing problems. CAP problems often show up in school children as difficulty attending,

2. From what Mrs. Scarborough tells me, you were not too familiar with some of my tests and were perhaps skeptical about auditory processing in

eneral. Therefore, I thought it might be helpful for us to get together so I could show you what I found when I evaluated Sally. I think it will be of interest to you. By attending to some of the problems that we see, Sally should show some rapid progress, and this in turn will save the school system a lot of money (in special services, or heaven forbid a law suit) in the long run.

3. At this point the administrator might become interested in what you have to say, or he could become defensive. I will assume that the gentleness of your manner and your sincere concern for the child's welfare will come through to him and that he won't become defensive.

4. In going over my materials, Mr. B., it would help if I knew where you were coming from. I implied from what Mrs. S. said that you might not hold CAP in high regard or possibly that you did not have much first hand knowledge of this work. Can you clarify this for me? At this point he could say "you're damn right I have a negative view about ..." or hopefully he will take a more cautious position that will leave room for an amicable exchange.

5. I'm not surprised that you have not had much exposure to CAP as any people who attended universities in the 1500s recent years, or since the "Chomsky Revolution", have not been exposed to the importance of this work and how it dovetails with the "top-down" view that you have.

6. My reason for making this appointment with you, is to talk about Sally. At this point, Ackie recommends that you produce Sally's folder and proceed with the raw data (if possible sitting next to Mr. B., so you can point things out as you go along). "Now Mr. B., the first thing that we do is to test the children to ascertain whether there is evidence of peripheral loss. Sometimes, a hearing loss can throw off certain central

tests responses of a child, so we need to check this to be sure our results are not contaminated.

Fortunately, Sally had good hearing. Here's her audiogram. You see This was supported by the tympanograms over here. You can see that the peak compliance was at

Another important procedure was to check on her recognition of single syllable words. These are all simple words that are well within her vocabulary (words like "jump" and "house"). You can see that she did very nicely on this test. She just made this one mistake in her right ear ("mow" for "no", that's a minor mistake).

So when we take all of the tests of peripheral function together, we see entirely normal performance. She also was very good in recognizing the monosyllabic words that were presented at a comfortably loud level in quiet (these are the W-22s).

7. Now Mr. B., I administered four central tests to see if we could find an explanation for her distraction etc., beyond the peripheral system. The first test I gave was similar to the word recognition test that I just showed you. The only difference was that I presented the words in a background of noise. The noise was not loud, it was 10dB below the level of the speech, which is a listening condition found in typical classrooms. Look over here, you can see how she performed. In noise she was making lots of errors and major ones at that. Here she said "flute" for "soap" and she had no idea what the word "train" was. This was pretty poor performance, even for the kids that I work with. Now, some of the errors were not too far off the mark, but look at some of these....

In her right ear Sally fell from 96% in quiet to 40% in noise. You can see how her performance drops when I introduced competing noise. And unfortunately for her, there is always

plenty of noise in elementary school classrooms.

8. Okay Robert (May I call you Robert?), another test in my battery is Phonemic Synthesis (PS). This procedure is much like sound blending in which individual sounds are presented to the listener who must put them together to give the word back correctly. The words are easy ones like "boat" and "milk". I gave her this test because Mrs. Palstomper (her teacher) pointed out that Sally is quite poor in phonics and is thus unable to sound out new words. PS is closely associated with phonics and "word accuracy".

On the PS test, Sally demonstrated three types of problems. 1) She tended to omit the first sound of the word. This is generally taken as evidence of a short-term memory problem, and I think that's what the psychologist reported. 2) She had discrimination errors, for example, look at this one, she substituted /o/ for /l/. Actually, that's a pretty common error in the kids with really poor phonemic skills. 3) Sally also gave two non-fused responses. Even one would have been significant. You see all along that she was getting the words right or wrong, but she had no trouble coming up with a word. A non-fused response is when the child gives you back the sounds but not blended into a word or even a nonsense word. Here she actually said /m/ /I/ /l/ /k/ and not the word "milk". This is another important sign of poor skill at the phonemic level.

9. Okay, Bob, I saved the SSW test for last because Mrs. S. said that this was not your favorite procedure. But in this case, it supports our other findings and then gives us some new information.

Move a little closer so you can see how the test works, the items, and what the child said in response. Now these words (RNC) go to the right ear but there is no competition from

Now look what Sally does when she hears these words ... and on item #3 she gets "daylight, lunch time" but says, "day time, lunch light". We couldn't mix up those spondees so badly, if we tried. She had a total of 7 reversals on the 40 items. For a child of 8 years, this is significant. We see reversals in kids who tend to be disorganized and they often write certain letters backwards (like "b" and "d"). Some also have problems in keeping the proper order of the letters as they spell words.

10. Because of your orientation I thought that you might not be concerned with issues like validity and reliability. I'm pleased that you are. The SSW norms are based on a national sample of 287 control Ss from 10 states and provinces of Canada. Despite the many audiometric suites, tapes and audiologists giving the test, the norms are entirely coherent and the standard deviations relatively small. The norms agree nicely with previous normative studies. Sally needed error scores of 5, 13, 18 and or better on the four Conditions, to fall within the normal range. Her percentages of error exceeded these limits for the RC, LC and LNC Conditions. The RC and the LNC failures indicate poor phonemic decoding skills. This agrees with ... and helps to explain The LC Condition score

I also looked at Response Bias (RB) to see if any of the classical patterns were demonstrated. RB refers to You can see over here that Sally made 27 errors on the first halves of items but only 18 on the second halves. This is a sign of short-term memory difficulty, much like what I showed you on the PS test, if you recall. ...

11. The only central test in which the child was not below normal, was on the Competing Environmental Sound (CES) test. This is the only central test that deals with sounds, other than speech.

12. Sally was so poor in so many areas of central auditory functioning that I felt it necessary to show you this. The findings are even more important because we have been highly successful in turning the situation around for these children and thereby improving the difficulties that were noted in school (including reading, spelling, articulation etc.).

Some of Sally's problems, such as her distractability, can be reduced by controlling the noise levels in class. In this case, I would recommend Another possibility is to In either case I would also like to see her get some "noise desensitization therapy", so that she will feel more comfortable in noise and improve her recognition of words when it is noisy.

If a resource room teacher or a speech pathologist could work with her on short term memory, this would be quite beneficial. I can direct you to sources of materials if you are interested in going ahead with this work.

Because of her difficulty with phonics and our various findings that implicate her phonemic decoding ability, it is recommended that she be administered therapy that will reduce or eliminate the problem. We generally see dramatic results in children of this age when they receive therapy. The therapy is short-term and the benefits are long-term. Usually 6 months after Phonemic Synthesis therapy we find that the child is even further ahead in this skill than when tested at the end of therapy. The carry-over is seen in the child's speech, etc. etc. Another program that is very useful for this problem is Lindamood's ADD program, which I believe is available already in this school district.

13. I think that you must be somewhat impressed by what our evaluation turned up in Sally's case. I think that you will also be pleased with the results of the remedial program. However, I surely can't blame

you if you are still a bit skeptical and want a hand in evaluating the benefits for yourself. If so

14. Now Frustrated, Ackie recommends that if your friend Bobbie B. is visibly shaken and excited by the new revelations, be sure to pick up the check (if he insists, let him leave the tip).

Well, this is probably how Ackie would handle the situation. Some of you readers out there have had to deal with skeptics (a great group because they are open to learn and teach) and adversaries, also. How did you get them to listen? How did you convince them to delve deeper and to take a chance? What is not a good strategy? Please, please write.

(signed) Love and Kisses, Ackie

P.S. Hey Frustrated, you probably guessed that the SSW Reports does not pay too well (even for their full-time syndicated staff). So if my advice helps you to tear down a Berlin wall or two and consequently you become independently wealthy, I hope that you remember little 'ol Ackie, banging away here at her typewriter. How about a couple of bucks at Hanuka or buying me a vodka at the 1995 ASHA convention in Leningrad?

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I am pleased to inform you that Laurie Freunds Schuh, our former Business Manager, is a proud mother (for the third time). Upon graduation, she, Scott and their children will confound the census takers and move to new horizons.

Do not fear that the managerial controls of SSW Reports will flounder. Lori Serafino is the new Business Manager. She figured out the books and is right on top of the job. We have not had any complaints in a while (reducing her challenge). So, if you have any complaints, do write.