

Center for Aphasia



and Related Disorders

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Aphasia News

Happy Holiday Season!

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Have you Heard?

The annual
Holiday Party is
December 12th!

See page 9

Dear Reader,

Welcome to the second edition of *Aphasia News*, our newsletter from the Center for Aphasia and Related Disorders. We hope all of you are well and enjoying the holiday season.

This issue of our newsletter contains a special contribution from our newest staff member at the Center, Dr. David Wilkins. Originally from Australia, Dr. Wilkins has been a professor of linguistics at UC Davis and SUNY Buffalo, and most recently at the Max-Planck Institute for Psycholinguistics in the Netherlands. Dr. Wilkins has done a great deal of research on an Australian aboriginal language and worked extensively with his interpreter who became aphasic (see "It Can Happen to Anybody: Aphasia in the Deserts of Australia" in this edition). His expertise in language will be a tremendous help to us in understanding more about how brain injuries affect the language system.

We have also included a little survey for you to fill out if you would like to give us feedback on our activities at the Center. You could mail it back to us, or bring it in to your next appointment. Your responses will tell us if we are doing a good job!

Have a wonderful holiday season and a happy new year!

Nina F. Dronkers, Ph.D.

Director, Center for Aphasia and Related Disorders

Ever Wonder How Some of Those Aphasia Types Got Their Names?

By Nina Dronkers, Ph.D. and Jary Larsen, Ph.D.

We often hear about “Broca’s aphasia” and “Wernicke’s aphasia”, but how did those names come about? Who were Broca and Wernicke? And what did they do to have their names associated with a language disorder?

Back in 1861, Pierre Paul Broca, a Parisian surgeon with an interest in anthropology, saw a chronically ill patient, by the name of Leborgne. This patient had a severe speech deficit that prevented him from producing anything more than a single syllable, “tan”. The patient used this, and only this, recurring utterance any time he tried to initiate speech. He was not able to produce any other words, but could manipulate the intonation of his recurring utterance to convey different meanings.

When Leborgne died a few days later, Broca examined his brain. He discovered several damaged areas, but thought that the center of the lesion was in the lower, front part of the brain in an area known by anatomists as the “inferior frontal gyrus”.

Shortly thereafter, Broca encountered a second patient, Lelong, who also had a recurring utterance and a lesion involving the same brain area. Based on these two cases, Broca suggested that this region in the inferior frontal gyrus was responsible for the articulation of speech, though not for language, since he believed his two patients had perfect comprehension. Broca, therefore, termed the deficit “aphemia”, Greek for the “inability to speak”. Later, another physician, Trousseau, changed the name of this problem to “aphasia”. The brain area identified by Broca became known as Broca’s area, and the behavioral deficit associated with it became known as Broca’s aphasia.

“Broca, therefore, termed the deficit ‘aphemia,’ Greek for the ‘inability to speak.’”

Several years later, a 26-year-old German physician, Carl Wernicke, reported on a language disturbance that was quite different from the one described by Broca. He examined two patients who had problems understanding spoken language. Their speech was relatively fluent and easily produced. However, it was incomprehensible and filled with nonsense words that did not exist in their native language of German.

Wernicke later examined the brain of one of these patients and thought that the most damage was in the back part of the brain, called the “posterior superior temporal gyrus”. He associated this area with the storage of the “auditory memory for words”. He concluded that this region was crucial for language comprehension and that deficits in comprehension were caused by the loss of these memories. He thought that the distorted speech he noted in his two patients was due to their inability to monitor their own speech. The specific area identified by him became known as Wernicke’s area, and the behavioral deficit came to be known as Wernicke’s aphasia.

By documenting this second type of language disorder, Wernicke offered the scientific world a distinction between the “expressive” aphasia associated with Broca’s area, and the “receptive” aphasia described by himself. His discovery started the idea that there were several different parts of the language system and that these different functions were housed in different parts of the brain.

Stay tuned for information on more discoveries of language areas in the brain in future issues of [Aphasia News](#).

It Can Happen to Anybody: Aphasia in the Deserts of Australia

by David P. Wilkins, Ph.D.

For people with aphasia the problem of not being able to talk as they once used to can be both frightening and isolating. It's easy to feel that you're the only one having this kind of problem. However, aphasia does not discriminate and it affects people of all cultures, languages and walks of life – even Aboriginal people from the deserts of Central Australia. What can differ from country to country and culture to culture is how society treats people with aphasia, and also how the aphasic syndrome affects an individual's ability to communicate. Here I'd like to talk about an Aboriginal woman from Central Australia who became aphasic. You'll see how she managed to remain a productive member of her community despite her aphasia.

“Aphasia does not discriminate and it affects people of all cultures, languages and walks of life – even Aboriginal people.”

In 1982 I was asked to go and work as a linguist for an Aboriginal-controlled bilingual primary school in Alice Springs, in Central Australia. The people there speak a language called Arrernte, and they wanted their children to have schooling in both Arrernte and English. They also wanted their children to retain their cultural traditions while learning to live in the wider Australian society.

One of my first tasks was to learn the language, and one of my main teachers was a woman named Margaret. Arrernte is a very different language from English, and very hard for an English speaker to learn, but Margaret was a patient teacher and soon we could carry on our conversations together in Arrernte.

Not only could Margaret speak, read and write both English and Arrernte (a writing system had recently been created for Arrernte for use in the school), but she also used some other modes of communication. Like most other adult members of her culture, Margaret could communicate using a form of manual sign language as well as a conventional form of drawing in the sand. Sometimes you can see Arrernte people silently telling stories to their children just by drawing in the sand and/or

signing.

Another feature of the Arrernte world of communication is that they use gesture much more than Anglo-Australians. The full meaning of a spoken Arrernte sentence may be dependent on the gesture that accompanies it. So, Margaret, like other members of her community, had at least seven modes of communication at her disposal – spoken Arrernte, spoken English, written Arrernte, written English, sign language, sand drawing and manual gesture. These could be used independently or in various manners of combination.

In 1991, when Margaret was only 48, she had a stroke which left her aphasic. She also suffered some paralysis

on the right side of her body. As is common in other parts of the world, her stroke is linked with her diabetes. Diabetes is a major problem for Aboriginal Australians as well as other indigenous populations who have recently come into contact with a Western diet.

When Margaret first had her stroke she could not speak or write at all. But, she could still do some signing (with her left hand), she could still do sand drawing (with her left hand), and she could still gesture appropriately. After several weeks, she began writing with her left hand and, with great difficulty, she started pronouncing her first faltering one-syllable words. She also progressed from a wheelchair, to a walking frame, to a cane, and much later to walking on her own.

Over the past 10 years her use of her seven different pre-stroke modes of communication has continued to change. When she returned from the hospital to her community she seemed to have less

(story continued on next page)

aphasics do. This is largely due to the fact that she could still

(story continued on next page)

systems in the culture – sign language, sand draw-

Aphasia in the Deserts of Australia

(continued)

problems fitting back in than many English-speaking aphasics do. This is largely due to the fact that she could make herself understood using other communication systems in the culture – sign language, sand drawing and gesture.

Margaret’s speech, however, was still only one or two words at a time. She has written:

“I couldn’t speak much at all, I couldn’t control my tongue properly so I wasn’t making the sounds I wanted. But, I could think properly, I just couldn’t get out the words I was thinking to say.”

At first she used wordboards that were custom made for her (one in Arrernte and one in English) and she’d use these to interact with some people (mainly English speakers who were not a member of her culture). She also later started using a form of electronic communication device: a Canon Communicator that prints out a message on a strip of paper, as well as showing a message on a small screen. Although she used these augmentative devices, and found it an important stepping stone, she was always wanting to move beyond them, largely because they made her feel alien from her culture – nobody else in the community uses wordboards or fancy machines (they speak, sign, draw, write, and gesture).

Margaret has struggled to get her speech back. With ten years of hard and conscious effort, her English has come back pretty well, but her Arrernte has not. When I visited Margaret in July of this year, she had managed to build up her speech rate to about 30 words per minute. This is still slower than the average speech rate of 150 words per minute, but it is significantly faster than wordboards or machines will allow, and they’re her words and meanings, in her voice.

Margaret wants her story to be told because she

knows how frightening a stroke and resulting aphasia can be. She wants people to know that they are not alone, and although everybody’s problems are different, she believes that they can teach each other with their experiences.

I believe Margaret’s case is important because it teaches us several important things:

1. People who find community acceptance after they become aphasic often have a more positive attitude and more motivation.
2. In the beginning it is important to acknowledge and work with the aphasic person’s communicative strengths (their ability to gesture, write, sing, etc) rather than focusing on their communicative weaknesses.
3. It is important to realize that we have many different modes of communication, not just speech.
4. Augmentative communication devices, while often helpful, are typically a signal of difference, which the aphasic person doesn’t like. If such augmentative devices are presented as a step along the road to a communication solution that is more acceptable to the person, rather than the final solution to their problems, there could be a greater acceptance of, and benefit to, their use.
5. Though progress may be slow, it is possible to continue to improve one’s language and communication abilities for very many years after a stroke.

Over 10 years, Margaret feels like she has made slow but steady improvements. She is now working on getting her own language, Arrernte, back. She remains optimistic.

“People who find community acceptance after they become aphasic often have a more positive attitude and more motivation.”

Face to Face

with Juliana Baldo, Ph.D.

Gary has been actively involved in our weekly Speech and Support Group for the last four years. He has been an enthusiastic and dedicated participant. I spoke with him recently about his life before and after his stroke.

JB: Where were you born?

GB: I am California-grown. I was born in Westwood, CA, near Chico. I went to high school in Oakland and Antioch, and I played football for both.

JB: What position did you play?

GB: Quarterback and fullback.

JB: What happened after high school?

GB: I worked for Dow for one year and then went back to school. I entered the service and went to helicopter school in Fort Benning, GA. I spent 1 year in Vietnam and two years at Texas Helicopter School as an instructor. I was out of the service in '67.

JB: What did you do in Vietnam?

GB: I was at Vinh Long in South Vietnam. Mostly we carried South Vietnamese troops. Also we did “milk runs”—taking advisors here and there.

JB: What happened after your time in the service?

GB: I went back to Dow, and my first daughter was born in Antioch. In '71, I started doing real estate work with my Dad.

JB: How did that end?

GB: When my Dad died, I sold everything and went back to flying helicopters. I was contracted to work for TV stations. I worked as a pilot until I had my stroke.

JB: What was the most exciting thing that happened as a pilot?

GB: The World Series was happening. I took a cameraman to cover the game. We took pictures from up high. While we were flying, we had to fly across the bay to Oakland Airport. I called into the airport, and they said I couldn't land—that they were closing the airport because of an earthquake. I looked toward the bay bridge and saw a dark spot. So I flew over the bay bridge and saw the broken area. I flew right by the Nimitz, and I saw that the freeway collapsed. The cameraman didn't know

what he was doing. His camera was all over the place, and they were broadcasting us. I had to help him. He got an award for it. I had many good times flying.

JB: How did your stroke occur?

GB: Sunday got up and went back to bed—everything was spinning. Couldn't get out of bed. Wife called 911. Had numbness on the right. I was taken to John Muir ER and got a brain scan. Double vision went away and I watched football in hospital. Then I went out—black. I was back in ER. I thought I was talking but I was just muttering. Couldn't move on the right. One week in ICU. I got moved to another ward, then got more physical therapy and speech. I was in a wheelchair. I was one month in the hospital. I couldn't walk. After about 6 months, I had a psychological downturn. I got severe depression. I got claustrophobia being in the house, and I didn't want my wife to leave me. I was put on anti-depressants, and it took me about a month to feel more normal. They didn't warn me about depression—it was a complete surprise to everyone. I finally got walking and talking better.

JB: What advice would you give to caregivers?

GB: Take a break because you can get worn down. Caregivers should go by themselves—do things on their own. When my wife went back to work, I just cried and cried. You're so emotional.

JB: But do you think it was the best thing for her to go back to work?

GB: Yes. Put responsibility on me, even if it was painful.

JB: What therapy do you think is helpful for stroke patients?

GB: The group helps because it's better than sitting around vegetating. Reading therapy—reading articles helped. I did my own exercises—just getting out and talking to people. You have to do it, even if people look at you funny. You have to try. Makes you walk. When I first started, I practiced talking into tape recorder, and I'd listen back to it. That helped. If you don't use it, you lose it.

Driving after Stroke:

Q & A with the Department of Motor Vehicles

Q: I received a notice from DMV saying I may lose my driver’s license. I have a physical disability. What should I do?

A: Immediately, call DMV and do the following:

1. Request a hearing. A hearing is a meeting with a DMV employee.
2. Ask what forms a person needs to get from DMV to present as proof that he/she can drive.
3. Go to your doctor and ask him/her to fill out the form and give him/her a date when DMV needs the form.
4. Give the doctor a copy of the guidelines for impairment. Provide a list of medications, if any.
5. Remind the medical staff that the form must be typed or easy to read. The doctor must sign the report and list his/her specialty. You must also sign the form.
6. Send the forms to DMV. Keep a copy.
7. Take any driving tests that DMV asks you to take
8. Go to the hearing.

Q: I have never had any driving violations but I have a recent physical handicap. When can DMV suspend my driver’s license?

A: Under California law, DMV has the duty to refuse to issue or refuse to renew a driver’s license in cases involving safety. DMV must show that the actual person cannot safely operate a motor vehicle because of a physical or mental condition.

Q: What does DMV look for when it conducts an investigation and reexamination?

A: DMV looks at nine factors to establish if a person has the necessary physical and mental skills to safely operate a car.

1. Physical Requirements – Does a person have the strength, coordination, stamina and mobility to drive?
2. Sensory Functions – Can the person see, hear, and have feeling in their hands and feet?

3. Mental Requirements – Can the person correctly interpret information that is seen and heard? Can the person focus their attention on driving? Does he/she have good judgment?

4. Emotional Stability

5. Knowledge Requirements – Does the person know the rules of the road? Can he/she pass a written or oral test on driving?

6. Physical Limitations/Restrictions – Can the person operate all the controls in a car, e.g. brakes? Can he/she steer, coordinate pedals, and control the gearshift? Can the driver look left/right and over shoulder and properly use mirrors?

7. Physical or Mental Condition and History -- What is a driver’s diagnosis? What are the symptoms? When did the condition start? What is the current status? What is the cause? What is the physician’s evaluation and what is the prognosis?

8. Aggravating Factors – Does the driver have a history of alcohol or drug use?

9. Treatment – What medications must the driver take? What are the side effects of the medication? Does the driver follow his/her prescribed regimen?

Q: I have a physical disability that has impaired my ability to move. I have had my car altered to change all the controls so I can work them. Will DMV take away my license?

A: Not necessarily. DMV looks to see if a person with a physical or mental condition can compensate for his/her condition or disability. If a person has made effective adjustments, then DMV will continue to license the person. DMV also looks at a driver’s self-awareness of his/her condition.

“The DMV looks to see if a person with a physical or mental condition can compensate for his/her condition or disability.”

This information was provided by Protection and Advocacy, Inc. For more info, see www.pai-ca.org.

*Wishing you and your family
peace and happiness this
holiday season.*



*Sincerely,
Your friends
at the Aphasia Center*

Game Zone

IN THE FOLLOWING LISTS, TRY TO FIGURE OUT:

1) WHICH WORD DOES NOT BELONG?

2) WHAT DO THE OTHER 3 WORDS HAVE IN COMMON?

(ANSWERS AT BOTTOM OF PAGE 10)

- | | | | |
|-----------|----------|----------|--------------|
| 1. BEEF | LAMB | PORK | APPLE |
| 2. STOVE | SINK | FLOWER | REFRIGERATOR |
| 3. HONDA | KRAFT | FORD | TOYOTA |
| 4. MOUSE | PICTURE | FRAME | PHOTO |
| 5. SISTER | LADDER | MOTHER | COUSIN |
| 6. CAKE | PRESENTS | BIRTHDAY | KEY |
| 7. SALT | PAPRIKA | BELT | PEPPER |
| 8. FINGER | HAND | LEG | CAR |
| 9. PIZZA | CIRCLE | DONUT | SQUARE |
| 10. STAR | MOON | TEA | GALAXY |
| 11. TAPE | SILVER | COPPER | ALUMINUM |
| 12. BUSH | BOX | HOOVER | CLINTON |

Announcements

**SPEECH GROUP
HOLIDAY PARTY**

When: Wednesday, December 12th, 1:00-4:00pm

Where: VA Martinez, Room E8 A&B

(same location as past years)

What to bring:

- 1) If you are able, please bring a drink or dish to share.**
- 2) Bring a gift-wrapped ornament to exchange.**

If you have any questions, call Juliana at (925) 372-4649.



Aphasia News

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Thanks to:

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We would also like to thank the members of the
Stroke Support Group and their families
&
The Speech Pathology staff

Newsletter Information

If you would like to receive this newsletter
or you have comments/suggestions e-mail
Juliana at juliana@socrates.berkeley.edu or
write to:

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We welcome your comments and questions!

Answers to Game Zone: 1. Apple 2. Flower 3. Kraft 4. Mouse 5. Ladder 6. Key 7. Belt 8. Car 9. Square 10. Tea 11. Tape 12. Box