

We have an opposite state of affairs in Wernicke's aphasia. Understanding of spoken words is poor: information about the word cannot get from the auditory cortex to the semantic analyzer because Wernicke's area is damaged. The patient's speech is semantically deviant. The propositions sent to Broca's area are not right in the first place, because they are formed by the damages semantic analyzer. Because Broca's area is working normally, it strings together what it receives, but it receives gibberish (Martindale, 1977)

Conclusion

Nowadays, linguists and psycholinguists are convinced that speech disorders are complicated obstacles in ESL and EFL speech environments. A lot of research studies have been administered in this respect, but there are still many questions which have remained unanswered (Bierwisch, 1981). Language teachers are more involved in such cases because the speech disorders impair the place and the manner of articulation and cause a tragedy in learning. More importantly, these deficiencies may debilitate the language acquisition device.

Therefore, we as language teachers must not ignore these drawbacks and try to find new ways to help the learners and recommend them to get in touch with counselors and psycholinguists to receive treatment to become better learners. In the long run, if the teachers obviate these problems, a better language teaching and learning environment will follow.

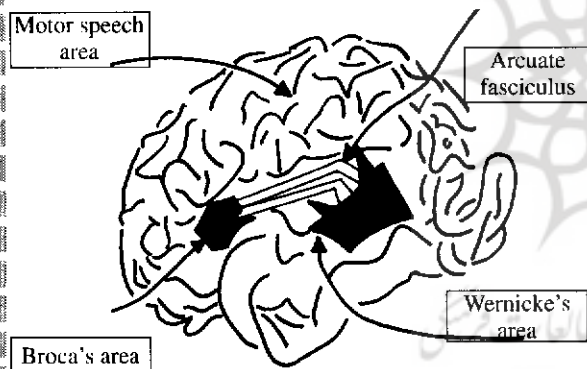
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of wrong terms or neologism. Geschwind (1979) quotes this sample from a patient asked to describe a picture of boys stealing cookies while their mother's back was turned: "Mother is away here working her work to got her better, but when she is looking the two boys looking in the other part. She's working another time." (Martindale, 1991)

What Aphasia Tells Us

Broca's area is in the left frontal lobe of the brain, just beneath the motor area, Wernicke's area is in the left temporal lobe, just behind the primary auditory receiving area. Their positions are shown in the following figure.



Adam, M.J., 1970

As you can see, the two areas are connected by a bundle of fibers called **arcuate fasciculus**. On the basis of findings concerning damage to Wernicke's and Broca's areas, Wernicke (1874) proposed a theory of speech that is still widely accepted.

Wernicke's area contains the semantic analyzer and the speech analyzer. When we speak, we select a set of meaning from the semantic analyzer. The meanings are coded in the form of propositions and specific messages.

Wernicke did not put it in exactly these terms, because case grammar had not yet been

devised, this point is that the elements of the sentence are not arranged as words in a sequential string. After the proposition has been selected, meanings are associated with morphemes, from Wernicke's area, information about these elements is sent to Broca's area via the arcuate fasciculus. Broca's area arranges the elements into a sequential string. For example, "John spoke to Marry about aphasia". When the proposition is arranged in this way, the cases are expressed in various ways. The past tense is expressed by using "spoke rather than speak." Finally, all the elements are arranged into a sequential string. It is incorrect to think about these elements as words; They are not words until they are spoken. Broca's area passes information about the elements to the motor speech area, the part of the motor cortex that controls the mouth, tongue and vocal cords. This area moves the speech apparatus, and the element are expressed as words. When these words are heard by someone else, they go first to the auditory receiving area. From there, they are passed to Wernicke's area, where they excite activity in the spoken word and semantic analyzer. Broca's area is also involves, so that syntax can be decoded simultaneously.

In Broca's aphasia, Broca's area is damaged, but Wernicke's area is intact. A semantically meaningful proposition can be generated and passed to Broca's area via the **arcuate fasciculus**; however, when it arrives, it cannot be decoded and strung together because Broca's area is damaged. Because Wernicke's area is intact, the patient can still understand some words. Understanding a word involves passing information from the auditory receiving area to the speech analyzer to the semantic analyzer.

someone paralysed down the right side of their body after a stroke, know that the stroke affected the left side of their brain. (Aitchison, 1992 P. 132)

The hemispheres look roughly similar, but this is an illusion. One of them, usually the left, is the more powerful dominant hemisphere. This is not only because it controls the right side of the body and the majority of humans are right handed - but also because it normally controls language.

A large number of the human races are born with their brain "wired" for language in the left hemisphere. Humans who do not have language in their left hemisphere are often left handers.

Those who have problems with speech production, such as a grammatic aphasias, mostly have injuries towards the front of the brain, while those who have problems with comprehension, such as Fluent aphasias, have injuries towards the back. (Aitchison, 1992 P. 133)

In the nineteenth century, Paul Broca, (1861) a French surgeon pinpointed an area in front of, and slightly above, the left ear. According to him, postmortems showed that this area had been destroyed in the brain of two patients who could produce hardly any speech. Even today, damage to the general region known as Broca's area is statistically likely to cause severe speech problems so much, so that a grammatic speech is still sometimes known as Broca's aphasia.

Some years after Broca's claims, Karl Wernicke, (1874) a German neurologist, noted that several patients who talked fluent nonsense had severe damage towards the back of the brain, in an area under and surrounding the left ear. This became known as Wernicke's area and Fluent aphasias are some times said to be suffering from Wernicke's aphasia. (Gleason, 1993)

Language Disorders

In daily life we sometimes come across people who have problem in speaking and communicating with others. These people suffer from some kinds of language disorders. Two prevalent language disorders are, as mentioned before, Broca's aphasia and Wernicke's aphasia. Some prominent characteristics of these disorders are elaborated in this article. (Chastain, 1988)

Broca's Aphasia

Those who are involved in this mental deficiency are not properly able to avail themselves of syntax. They can't use the function words, such as, prepositions (e.g., on, in), pronouns (e.g. he, she), and connectives (e.g., and, but). Function words are those that allow us to express the cases and prepositions and relationships between phrases. People with Broca's aphasia have little difficulty producing or understanding nouns. Here is an example (quoted by Geshwind, 1979) of such a patient's response to a question about a dental appointment: "Yes... Monday...Dad and Dick... Wednesday nine o'clock...doctor... and... teeth. This type of speech is called "Word heap". The nouns are observed, but there is no right syntax. These patients can realize speech if it is semantically unambiguous.

Wernicke's Aphasia

In this respect, the patients are involved in problems with semantics rather than with syntax (Jackson, 1956). The speech produced by those patients are syntactically all right and seem errorless, but if someone closely attends to these words, one will definitely spot the use

Introduction

We know that humans are psychological beings, and the relationship between teachers and students is based on this important factor. Thus teachers are expected to be familiar with the learners' affective and psychological variables and attempt to solve students' problems. This will provide effective classroom activities for developing communication and learning skills in ESL or EFL environments. Therefore, sensitive teachers always try to keep up with the latest research studies and productive information in this respect.

We, as teachers, have definitely witnessed the problem of "stuttering and stammering that some of our students are involved in. We also know that this speech disorder is usually destructive to students' learning.

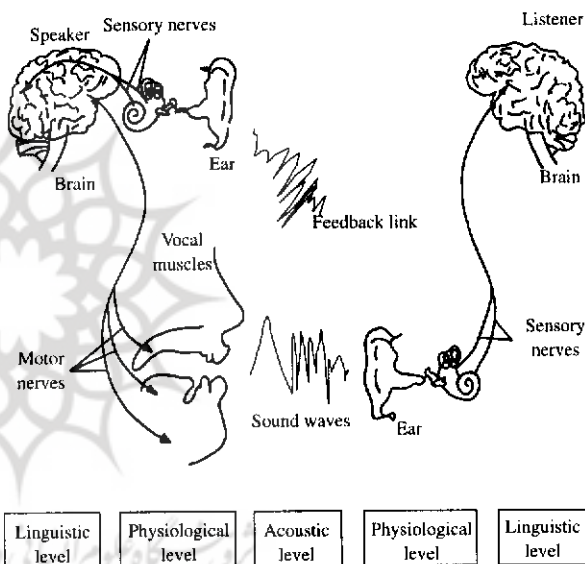
This article, discusses the nature of this type of deficiency and may be fruitful in providing a better class management and learning environment.

The process by which a speaker turns a mental concept into spoken utterance is also discussed. It is more difficult to study speech production than to investigate speech perception or comprehension because experimental tasks which can reveal the complex steps in the process are not easily constructed. Thus psycholinguists, interested in the speech production process, must use more indirect methods to gain insight into how this is accomplished. Researchers have historically relied on two kinds of data in the construction of speech production models—speech errors and speech disfluencies. These data have provided evidence for the units used in generating speech and for the stages which lie between the message the speaker wishes to

convey and its spoken expression.

Knowing a language means knowing how to produce and comprehend an unlimited set of utterances. A competent speaker/ listener does this effortlessly without conscious knowledge of complexities involved in the process. (Fromkin, 1993)

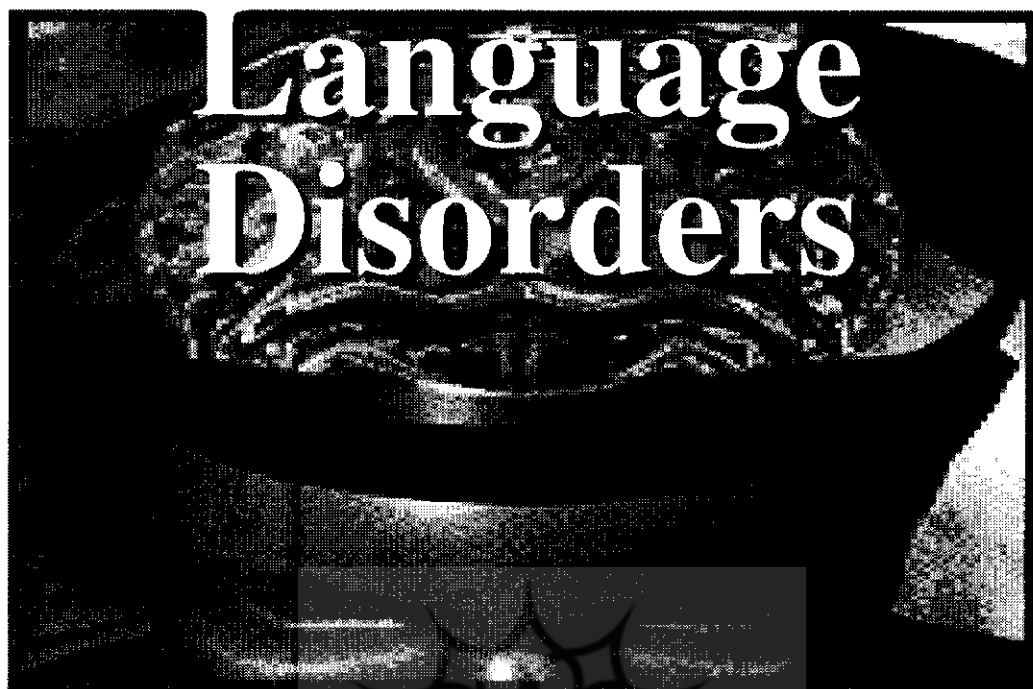
The following figure reveals that spoken message exists in its progress from the mind of the speaker to the mind of the listener.



Fromkin, 1993

Language and the Brain

The human brain is roughly organized like a peach, in that there is a large outer layer (cerebrum) surrounding an inner kernell (the brainstem), which keeps people alive. The outer layer is extensively folded, and is the source of all intentional thought and movement. It is grey in color, so giving rise to the phrase: "Use your grey matter for think!" and is divided into two halves, the cerebral hemisphere. The left hemisphere controls the right side of body, and the right hemisphere the left: so if you meet



Iraj Noroozi

Ph. D. Student, Islamic Azad University

چکیده

این مقاله توضیح می دهد است که چگونه یک گوینده تفکرات خود را به درستی به زبان می آورد. هیچ کس نمی تواند به طور دقیق مراحل و محاسبات ذهنی اشخاص را هنگام بیان عبارت مورد مطالعه قرار دهد. با وجود این که تاکنون تحقیقات پیشرفته ای درباره چگونگی عمل کرد مغز انسان هنگام فکر کردن، صحبت کردن و یا گوش دادن به موضوعی به عمل آمده ولی هنوز کاملاً مشخص نشده است که عبارات چگونه و چه موقع در مغز شکل می گیرند و چگونه به تکامل می رسند.

در این راستا زبان شناسان و روان شناسان زبان اشتباهات و نارسایی های تکلم اشخاص را مورد مطالعه قرار می دهند. بیان های ناقص افراد می تواند وسیله خوبی برای روشن شدن این مشکلات باشد.

کلید واژه ها: عدم قدرت تکلم، قسمت تجزیه و تحلیل کننده تکلم در مغز، قسمت تجزیه و تحلیل کننده مفهوم در مغز

Abstract

This article has been concerned with the bridge between a speaker's concept and its grammatical expression. One cannot go into the speaker's brains and examine the mental processes and computations that are taking place when they are producing an utterance. Advanced researches which all provide some idea of neural activity in the brain when we are thinking, speaking or listening cannot tell us whether the speaker is constructing specific phrases, at what moment phrase construction occurs, or how it is accomplished.

In an attempt to understand this process, more and more linguists and psycholinguists have turned to speech error and other speech disfluency data. Deviant utterances serve as windows into the mind clarifying these shortcomings.

Key Words: Broca's aphasia, Wernicke's aphasia, speech analyzer, semantic analyzer, language disorders.