

## **Course One: An Introduction to Psycholinguistics**

### **Definition**

The term 'Psycholinguistics' appears to have first been used to refer to psychology of language in the 1920's. However, the birth of psycholinguistics as a discipline is often linked to a seminar at Cornell university in 1951. Courses and research in psycholinguistics are found in multidisciplinary cognitive science throughout the world and the issues studied in this field are also of interest to computer sciences and one of the main contribution of this field of study is to understand the working of our minds through studying language use.

Psycholinguistics is a domain with fuzzy boundaries; and there is some disagreement among those who teach it as to how widely they should set their sights. Psycholinguistics can be defined as the study of the mental representations and processes involved in language use, including production, comprehension and storage of spoken and written language.

A broad view of the discipline might embrace all of the following:

- a. Language processing:** including the language skills of reading, writing, speaking and listening and the part played by memory in language
- b. Lexical storage and retrieval:** how we store words in our minds and how we find them when we need them
- c. Language acquisition:** how an infant acquires its first language. d. Special circumstances: the effects upon language of (e.g.) deafness blindness or being a twin; conditions such as dyslexia or aphasia (the loss of language after brain damage
- e. The brain and language:** where language is located in the brain, how it evolved and whether it is a faculty that is unique to human beings.
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- f. Second language acquisition and use.**

### **1- The main Focus of Psycholinguistics**

Psycholinguistics as a discipline studies **sentences and words** which means that :

- Production studies how sentences are generated, syntactic planning as well as word finding and building.
- Comprehension studies word recognition and sentence parsing.

**2- Language use Components/Steps Studied in Psycholinguistics**

<b>Processes</b>	<b>Production</b>		<b>Comprehension</b>	<b>Areas of Linguistics</b>
Central  Peripheral	Intention Planning Lexicalization Articulation		↑ Message(idea) Sentence Structure Words Sounds /Letters	↑ Interpretation Parsing Word Recognition Perception Discourse Analysis Syntax/Semantics Morphology/Syntax Phonetics/Phonology

**3-Research in Psycholinguistics**

Early research in psycholinguistics was conducted through observational approaches of every day behavior and especially on the spoken language because it is most easily observed like observing hesitation in speech and deduce the planning process and its steps or observing speakers’ errors and relate them to production or planning problems but later on, more sophisticated experimental procedures and equipment became available in the past half century in particular with the ready availability of software that allows a high level of control over the stimuli and collection of data with precise timing and response time measuring.

As far as Brain activity is concerned, there are many studies which include monitoring of the patterns of blood flow and other electrical activity associated with neural stimulation in the brain while a participant is carrying out some language tasks. These measures have a clear advantage over behavioral methods. For instance, brain activity is measured using functional Magnetic Resonance Imaging which tracks changes in blood flow. In more scientific terms studies showed that the Neurons that are active consume more oxygen from their blood supply than those which are inactive and oxygenated blood has different magnetic properties. This knowledge is useful in discovering whether a participant is saying lies for example relying on the part of the brain that is active and the flow intensity.