

**Daria Dubenko**

*Vasyl' Stus Donetsk National University*

*Vinnitsia*

*Research Supervisor: V.I. Kalinichenko, PhD in Philology, Ass.Prof.*

*Language Supervisor: N.V. Striuk, Lecturer*

## **APPLIED LINGUISTICS AND CLINICAL LINGUISTICS**

**Introduction.** Applied Linguistics is a science of language and the use of language. It learns different forms of communication. Linguistics has the rules for the form, meaning, and use of language.

**The objective of the paper** is to discuss the general issues of apply linguistics and clinical linguistics.

Applied Linguistics is a field of linguistics that identifies, investigates and seeks the solutions to language-related problems. This is the new study of language in general and of some particular languages. [1; 152]

Language is one of the most centrally relevant and important things you can study. Language is everywhere. The governing board of AILA say that applied linguistics is a means to help to solve specific problems in society. Applied linguistics focuses on the numerous and complex areas in society in which language plays an important role [2; 189]. This science studies linguistics, language and different solutions to language-related problems.

Linguistics is connected with different sciences. Some of them are: literature, philosophy, health sciences, computer engineering, biology (anatomy, neuroscience), physics (acoustics), language pedagogy, literature.

There are such fields of Apply Linguistics:

- Historical Linguistics;
- Sociolinguistics;
- Translation;
- Clinical linguistics;
- Lexicography;
- Dialectology;
- Speech pathology;
- Ethnology;
- Historical linguistics [3; 28].

One of these numerous fields is Clinical Linguistics. It is a study and application of linguistic theory to the fields of Speech-Language Pathology. Crystal says (1986): "Clinical Linguistics is the application of the theories, methods, and findings of linguistics (including Phonetics) to the study of those situations where all language handicaps are diagnosed and treated" [4; 25].

This is relatively new science too. Clinical linguistics is the fields of linguistics that uses linguistic concepts and theories to the study of language disorders and problems. That is why, clinical linguistics is a dual-facing science. Scientists say that the main and general roots of this field are in linguistics – its domain of application is

the vast array of clinical disorders that may compromise language. Clinical linguistics is a relatively new discipline, emerging since the late 1970s, which can be defined as “the application of the linguistic sciences to the study of language disability in all its forms” [5; 673]. Clinical Linguistics deals with speech and language disorders which has only linguistic symptoms. There are a lot of tools that are used by clinical linguists to treat, relief and diagnose different language problems. For this purpose clinical linguistics uses standardized and norm-referenced tests, communication checklists and profiles (some administered by clinicians, others are provided by parents, caregivers or teachers), and high quality methods, for example: conversation analysis, discourse analysis.

Most of us do not have any problems with speech and for most of us the language develops without any obstacles and difficulties, it is easy to learn. However, there are people who have a lot of problems with it. For many people, speech problems began in childhood; for others, it was a serious illness that led to severe consequences. The injury can cause it too. When language skills are not acquired by normal lines or are violated in adulthood, this is the result of linguistic disorders. Although linguistic peculiarities of these disorders are of interest to clinical linguists, it ultimately is a language for a linguistic pathologist (language and linguistic therapists in the United Kingdom) who must evaluate and treat clients with these abnormalities. Children and adults with speech disorders face significant social, economic, professional and academic problems as a result of these disorders.

The aim of clinical speech services is to alleviate the negative effects of linguistic disorders and improve the lives and capacities of people with speech disorders. A child or an adult with a disability may not speak the language, ask a stranger, or understand the teacher’s explanation in the classroom or at work. The language of people, who are sick with schizophrenia may not correspond to a specific context or violate social norms. The child with autism spectrum disorder (ASD) may not understand the topic of the conversation.

Therefore, this is a type of communication problem. Speech may get worse due to hearing impairment, disordered consciousness or speech impairment. These communication violations are also evaluated and handled by pathologists of the speech language.

In this way, the child with ASD may be unable to establish that the utterance ‘Can you open the door?’ is a request to open the door, and that the idiomatic utterance ‘Don’t stick your oar in conversation’ is a command to keep something secret. The study of word and sentence meaning in semantics is an important linguistic discipline for clinical linguists.

Adults with aphasia, dementia, or cerebral infections (e.g., herpes simplex encephalitis) often can cause naming and comprehension deficits. Warrington and Shallice (1984) in their study examined category-specific semantic impairments in four patients who had made a partial recovery from herpes simplex encephalitis. All four patients exhibited greater difficulty identifying animate things and food than inanimate objects. For these patients, the comprehension of abstract words was

significantly superior to the comprehension of concrete words. Examples of the responses of one of the four patients to inanimate object words and living things:

Inanimate objects:

Tent: temporary outhouse, living home.

Briefcase: small case used by students to carry papers.

Compass: tools for telling direction you are going.

Torch: hand-held light.

Dustbin: bin for putting rubbish in.

Living things:

Parrot: don't know.

Daffodil: plant.

Snail: an insect animal.

Eel: not well.

Ostrich: unusual.

People with language problems can struggle with topic management. In the next conversation a 63-year-old man ('PT') with right-hemisphere brain damage is talking to a 48-year-old woman ('DT') with no neurological impairment.

1 DT: We'll, I wish we had more time, I'd love to hear more about your travels.

2 PT: Yeah, I'd like to have a drink. (alcohol had been brought up previously)

3 DT: But I think \_\_\_\_\_ is expecting us and I think she has something that she wants you to work on—so, it's been nice chatting with you, we will have to talk again.

4 PT: It's been nice talking with you, \_\_\_\_\_, very nice. (pause) Outside of Yugoslavia, there is a place I'd like to go to and that is Australia.

5 DT: Really, they are supposed to be beautiful—lots to see.

6 PT: But, we only have one lifetime.

7 DT: Yeah, but, it's seems like you've made a good whack at it.

8 PT: Yes, I have.

9 DT: Well, I hope that you are not going to stay at \_\_\_\_\_ too much longer and you can get back ...

10 PT: I hope not, within a month, I'm supposed to go with Jim to Jamaica.

11 DT: Oh.

12 PT: Looking for a lady or whatever ...

13 DT: (laughs) Good luck.

On two occasions, DT wants to end the conversation but PT introduces a new topic on each occasion. This first occurs in turn 4 when, after a pause, PT starts to talk about how he would like to visit Australia. In turn 9, DT again tries to end the conversation, in turn 10, to start talking about a trip to Jamaica with Jim. The effect of each new topic introduction is to forestall closure and extend the conversation beyond its natural point of termination.

**Conclusion.** Like many applied disciplines in linguistics, Apply Linguistics is at the intersection of a number of areas. Linguistic studies show that clinical linguistics can be used to treat communication impairments at all levels of linguistics. Clinical linguistics deals with speech and language disorders, which has only linguistic

symptoms. Thus, apart from speech-language pathologists and clinicians, there is a major role for linguists to be played in clarifying, describing, diagnosing, assessing and providing intervention to the disorders. Thus, clinical linguistics can be introduced into the curriculum of linguistic sciences degrees.

### References

1. Routledge A. D. A Glossary of Applied Linguistics / A. D. Routledge. – New York, 2016. – 152 p.
2. Schmitt N. Applied Linguistics / N. Schmitt. – New York, 2014. – 189 p.
3. Richards J. C. Longman Dictionary of Language Teaching and Applied Linguistics / J. C. Richards, R. Schmidt. – London, 2002. – 28 p.
4. Crystal D. Aspects of clinical linguistic theory and practice / Crystal. – Perth, 1981. – 25p.
5. Crystal D. Clinical linguistics. The Handbook of Linguistics / Crystal. – Oxford: Blackwell, 2001. – 673 p.

*Alina Karpenko*

*Vasyl` Stus Donetsk National University  
Vinnytsia*

*Research Supervisor: O.O. Odintsova, Senior Lecturer  
Language supervisor: O.O. Odintsova, Senior Lecturer*

## PROBABILISTIC NATURAL LANGUAGE PROCESSING : BAYES THEOREM IN LANGUAGE MODELING

**Introduction.** Probabilistic reasoning is very important for NLP. Suppose that we have a system that recognizes speech, which converts an audio signal into text. Most of the time it will not be able to find the perfect interpretation of a speech signal. It may come up with a number of alternatives, some of which are more reasonable than others. For example, if you say “recognize speech”, it’s very possible that your system was going to hear something like “reach a crew peach”. Because for our speech recognition system those two strings sound very similar and they maybe very easy to confuse. But obviously for human being they are very different and one of them is reasonable, the other one is completely nonsensical. Which would suggest that we want the probability of the first string to be very high, and the probability of the second string to be relatively low. So, even if the speech recognition system has to chose between those two, it will have an easy time figuring out which one is correct.

Probabilistic modeling of NLP includes document clustering, topic modeling, language modeling, part-of-speech induction, parsing and grammar induction, word segmentation, word alignment, document summarization, coreference resolution. Probabilistic modeling is a core technique for many NLP tasks such as the ones