

Types of Linguistics

Lecture 9, 10

HISTORICAL LINGUISTICS

Historical linguistics (diachronic linguistics) is the branch of linguistics that studies how languages change over time.

It investigates the evolution of sounds, grammar, vocabulary, and meaning, as well as relationships among languages and language families.

The fundamental aims of historical linguistics are to:

- Explain **how and why** languages change
- Reconstruct unattested proto-languages
- Classify languages into **families and sub-groups**
- Understand patterns of linguistic evolution
- Trace **cultural and migration history** through language

HISTORICAL LINGUISTICS: AIMS

- Explain **how and why** languages change
- Reconstruct unattested proto-languages
- Classify languages into **families and sub-groups**
- Understand patterns of linguistic evolution
- Trace **cultural and migration history** through language

HISTORICAL LINGUISTICS: KEY RESEARCH TASKS

Domain	Tasks
Sound change	Identify systematic phonetic shifts across time and geography
Morphological change	Study development of inflectional & derivational systems
Syntactic change	Trace changes in sentence structures and word order
Semantic change	Investigate meaning shifts and lexical evolution
Lexical history	Study borrowings, innovations, replacements, neologisms
Comparative linguistics	Compare related languages to reconstruct ancestors
Language contact	Research pidgins, creoles, convergence, language shift

HISTORICAL LINGUISTICS: METHODS

Method	Description
Comparative method	Systematic comparison of cognates to reconstruct proto-forms
Internal reconstruction	Analysis of irregularities within one language
Etymology	Tracing origins and development of words
Philology	Study of historical texts & manuscripts
Archaeolinguistics	Linking linguistic and archaeological evidence
Corpus diachronic studies	Using digitized historical corpora for analysis

HISTORICAL LINGUISTICS: PRACTICAL APPLICATIONS

- **Genetic classification** of world languages
- Reconstruction of **Proto-Indo-European** and many other proto-languages
- Foundations for **archaeology, anthropology, and history**
- Understanding of **human migration and culture contact**
- Tools for **decipherment** (e.g., Hittite, Old Church Slavonic)

Historical linguistics also informs **modern language policy**, endangered language revitalization, neurolinguistics (language loss effects), and computational linguistics (statistical reconstruction models).

SOCIOLINGUISTICS

Sociolinguistics is the scientific study of the relationship between **language and society**. It examines how linguistic behavior varies and changes according to **social variables** such as region, class, gender, ethnicity, age, occupation, education, and social networks.

It focuses on:

- Social factors affecting language use
- Language variation and change
- Language attitudes and ideologies
- Language policy and planning
- Bilingualism, multilingualism, and code-switching
- Identity and power in communication
- Language and social justice

SOCIOLINGUISTICS: AIMS

- Analyze **linguistic variation** and its social meaning
- Understand how language constructs **identity** and **social hierarchies**
- Explain **language attitudes**, prestige, and stigma
- Study **language change driven by social factors**
- Inform **language policy, education, and revitalization efforts**

SOCIOLINGUISTICS: KEY RESEARCH TASKS

Field	Key Tasks
Language variation	Identify patterns of variation linked to social factors
Language change	Examine changes in progress and social diffusion patterns
Dialectology	Map geographical distribution of language features
Language ideology	Analyze beliefs about language prestige, correctness, normativity
Bilingualism	Study societal multilingualism, code-switching, language maintenance & shift
Language planning	Develop policies for education, official languages, minority rights
Interactional studies	Examine power, politeness, gender interactions, identity construction

SOCIOLINGUISTICS: METHODS

Method	Description
Sociolinguistic interviews	Structured conversational data (Labovian model)
Participant observation	Immersion in speech communities
Surveys and attitude studies	Measuring beliefs and perceptions
Ethnography of communication	Cultural interpretation of speech events
Corpus sociolinguistics	Analyzing large datasets for variation patterns
Acoustic analysis	Studying phonetic variation socially
Matched-guise technique	Testing language attitudes
Social network analysis	Linking speech variation to relational structures

SOCIOLINGUISTICS: KEY CONTRIBUTIONS

- Demonstrated that **language variation is systematic and structured**
- Proved that **social factors drive language change**
- Introduced **quantitative methods** to language science
- Advanced understanding of **bilingualism and code-switching**
- Challenged linguistic inequality and **language discrimination**
- Created foundations for **language revitalization efforts**
- Provided frameworks for **critical language pedagogy**

PSYCHOLINGUISTICS

Psycholinguistics is the scientific discipline that studies the **mental processes** involved in the acquisition, comprehension, production, and representation of language. It explores how the human brain enables language learning, processing, and use, combining insights from **linguistics, psychology, neuroscience, cognitive science, education, and computer science**.

It seeks to answer questions such as:

- How do humans acquire language?
- How is language represented in the mind?
- How do we understand speech in real time?
- How do we produce speech?
- What happens in language disorders?
- How does bilingualism work cognitively?

Psycholinguistics bridges **the structure of language** and **the biology of the mind**, making it one of the most dynamic and interdisciplinary areas of contemporary linguistic science.

PSYCHOLINGUISTICS: AIMS

- Understand the **cognitive mechanisms** behind language
- Model **language learning and processing**
- Explain **neural representation** of linguistic knowledge
- Investigate **language breakdown and recovery**
- Study **bilingual and multilingual cognition**
- Develop diagnostic tools for language disorders
- Inform **AI and natural language processing models**

PSYCHOLINGUISTICS: KEY RESEARCH TASKS

Domain

Key Questions

Language acquisition	How do children learn language rapidly and uniformly?
Language production	How do speakers plan and articulate sentences?
Language comprehension	How do listeners decode sounds and meaning?
Mental lexicon	How is vocabulary stored and accessed?
Memory & processing	How does working memory support language?
Neurolinguistics	What brain structures support language?
Language disorders	What do aphasia, dyslexia, and stuttering reveal?
Bilingualism	How does the mind manage multiple languages?

PSYCHOLINGUISTICS: METHODS

Method	Description
Eye-tracking	Measures reading and comprehension processing
Brain imaging (fMRI, PET)	Neural activity during language tasks
Event-related potentials (ERP/EEG)	Millisecond-level neural language responses
Reaction time experiments	Lexical decision and naming tests
Priming studies	Semantic, phonological, syntactic priming
Child language observation	Diaries, recordings, corpora
Neurological case studies	Aphasia, brain trauma, developmental disorders
Computational modeling	Simulating acquisition and processing
Elicited imitation & narrative tasks	Production and comprehension tests

NEUROLINGUISTICS

Neurolinguistics is the scientific study of how the brain enables language. It examines the **neural mechanisms, brain structures, and cognitive processes** that support language comprehension, production, learning, and impairment.

It is fundamentally interdisciplinary, combining:

- Linguistics
- Neurology & medicine
- Cognitive neuroscience
- Psychology
- Speech-language pathology
- Computational modeling

Neurolinguistics seeks to answer core questions:

- Which brain regions support language functions?
- How is linguistic information represented neurally?
- How does the brain learn and store languages?
- What happens to language when the brain is damaged?
- How do bilingual brains manage multiple languages?

Its findings inform rehabilitation, education, and modern brain-computer technology.

NEUROLINGUISTICS: AIMS

- Identify brain structures and networks responsible for language
- Understand neural encoding of phonology, morphology, syntax, semantics, and pragmatics
- Study language acquisition and processing at neural level
- Investigate language disorders and rehabilitation
- Model neural mechanisms computationally
- Support development of speech-recognition and brain–machine interfaces

NEUROLINGUISTICS: KEY RESEARCH TASKS

Domain

Goals

Neural correlates of language

Determine brain areas supporting linguistic functions

Localization & lateralization

Study hemispheric specialization (especially left-hemisphere dominance)

Neural representation

Investigate storage and access to linguistic knowledge

Brain plasticity

Understand reorganization after injury & recovery mechanisms

Language disorders

Analyze aphasias, apraxia, dyslexia, stuttering, dementia

Bilingual brains

Explore language control, switching, and neural overlap

Neurodevelopment

Study language emergence in infants and children

Neuroeducation

Apply neurological knowledge to language teaching

NEUROLINGUISTICS: METHODS

Method	Description
fMRI	Tracks blood-oxygen activity in brain during language tasks
EEG/ERP	Measures electrical activity, timing of brain responses
MEG	Maps magnetic fields from neurons (high temporal precision)
PET scans	Measures metabolic activity
TMS/tDCS	Stimulates or inhibits brain regions to test function
Lesion studies	Examines language deficits after brain damage
Dichotic listening	Studies hemispheric dominance
Eye-tracking	Measures processing during language comprehension
ECoG & BCI	Direct cortical recording for speech decoding

NEUROLINGUISTICS: PRACTICAL APPLICATIONS

Field

Neurolinguistic Impact

Medicine

Aphasia therapy, post-stroke rehab

Education

Critical period insights, language-learning strategies

Psychology

Cognitive therapy integrated with language

AI & Speech Tech

Speech recognition, language models, BCIs

Military medicine

Treatment protocols for traumatic brain injury (TBI)

Humanitarian trauma programs

Language recovery for war-affected civilians

COMPUTATIONAL LINGUISTICS

Computational linguistics is the interdisciplinary field that studies **natural language through computational methods**. It combines linguistics, artificial intelligence, data science, computer science, and cognitive science to model, analyze, and generate human language.

It focuses on:

- Building systems that understand and produce human language
- Creating computational models of linguistic knowledge and processing
- Developing tools for speech, text, and translation technologies
- Advancing theories of language through simulation and quantitative methods

Computational linguistics powers technologies used every day, including:

- Machine translation (Google Translate, DeepL)
- Speech assistants (Siri, Alexa)
- ChatGPT and large language models (LLMs)
- Text search, spell checkers, grammar checkers
- Automatic subtitling and transcription
- Language-learning apps (Duolingo)
- Social-media content moderation

COMPUTATIONAL LINGUISTICS: AIMS

- Model human language computationally
- Develop algorithms for language understanding and generation
- Build effective tools for real-world language processing
- Support linguistic theory with quantitative and simulation-based evidence

A deeper aim is to answer:

How can machines learn and use language — and what does that reveal about the human mind?

COMPUTATIONAL LINGUISTICS: KEY RESEARCH TASKS

Task	Description
Natural Language Processing (NLP)	Building algorithms to analyze & use language
Speech recognition	Converting speech into text
Speech synthesis	Producing natural-sounding speech
Machine translation	Automatically translating between languages
Text classification	Categorizing text (spam filters, sentiment analysis)
Information extraction	Finding key data in text (names, facts, emotions)
Computational semantics	Modeling meaning and inference
Dialogue systems	Conversational agents & chatbots
Corpora analysis	Quantitative data-driven language study
Language resources	Building lexicons, corpora, ontologies

COMPUTATIONAL LINGUISTICS: METHODS & TOOLS

Category

Methods

Machine learning	Neural networks, transformers, deep learning
Symbolic approaches	Grammars, rule-based parsing, logic
Corpus linguistics	Frequency analysis, collocations, concordance
Probabilistic modelling	N-grams, Bayesian models, Markov models
Embedding & vector semantics	Word2Vec, GloVe, BERT embeddings
Speech tech methods	MFCCs, acoustic modeling, spectrogram analysis
Evaluation	BLEU, ROUGE, perplexity, accuracy, WER

COMPUTATIONAL LINGUISTICS: METHODS & TOOLS

Programming languages & frameworks:

- Python, R, Java
- PyTorch, TensorFlow, spaCy, NLTK, Hugging Face Transformers

Corpora:

- British National Corpus (BNC)
- Corpus of Contemporary American English (COCA)
- Ukrainian National Language Corpus (GRAC)
- CHILDES (child language)

COMPUTATIONAL LINGUISTICS: PRACTICAL APPLICATIONS

Field	Examples
Education	Writing assistants, tutoring tools, automated scoring
Healthcare	Speech tools for stroke rehab; mental-health AI
Defense & security	Voice analysis, language intelligence
Humanitarian tech	Language support for refugees & displaced people
Business	Chatbots, customer analytics, content moderation
Academia	Corpus research, linguistic simulation
Accessibility	Voice control for disabled users, AAC systems

APPLIED LINGUISTICS

Applied linguistics is the scientific discipline concerned with solving **real-world language-related problems** using insights from linguistics, psychology, education, sociology, cognitive science, and communication studies.

It is not limited to language teaching, although that is a central domain, but spans every area where language plays a crucial role in human life, including justice, healthcare, migration, diplomacy, technology, and social integration.

Applied linguistics addresses questions such as:

- How do people learn a second language effectively?
- How can communication disorders be diagnosed and treated?
- How should governments plan and protect linguistic diversity?
- How can translation and interpretation be improved and professionalized?
- How can AI and computational tools support communication?
- How do language ideologies shape identity and power?
- How can language services support refugees and war-affected populations?

APPLIED LINGUISTICS: AIMS

- Language education and assessment
- Language policy & planning
- Intercultural communication
- Translation & interpreting
- Speech-language therapy
- Language & technology systems
- Language accessibility and social equity

APPLIED LINGUISTICS: KEY RESEARCH TASKS

Domain

Main Tasks

Language education & acquisition	Develop teaching methods, curricula, teacher training
Language assessment	Design fair, valid language tests (IELTS, TOEFL)
Translation & interpreting	Improve accuracy, ethics, industry standards
Speech pathology	Diagnose and treat speech and language disorders
Language policy	Protect endangered languages; plan multilingual education
Terminology & lexicography	Create dictionaries, terminology databases
Language in professions	Military English, medical English, legal English
Technology	Develop automated translation, grammar tools, AAC devices
Social justice & inclusion	Fight linguistic discrimination, ensure accessibility

APPLIED LINGUISTICS: METHODS

Method

Application

Classroom research	Teaching methods, learner strategies
Experimental studies	SL acquisition, processing, memory
Needs analysis	ESP curriculum design
Corpus methods	Teaching materials, vocabulary profiling
Assessment tools	Standardized testing & rubrics
Discourse analysis	Pragmatics, identity in communication
Fieldwork	Endangered languages, immigrant communities
Action research	Teacher-researcher collaboration

APPLIED LINGUISTICS: PRACTICAL APPLICATIONS

Field	Impact
Education	Communicative language teaching, TBLT, EMI
Migration & integration	Language support for refugees
Healthcare	Speech therapy, aphasia rehabilitation
Legal system	Forensic linguistic evidence
Military	Communication protocols, psychological operations
Business	Intercultural communication, professional English
Technology	Machine translation, educational apps
Cultural resilience	Language revitalization & identity building

MATHEMATICAL LINGUISTICS

Mathematical linguistics is the branch of linguistics that applies **formal mathematical methods** to study language structure, representation, and processing. It seeks to describe natural language using **formal logic, set theory, algebra, probability, information theory, and computational models**.

It is foundational for:

- Generative grammar
- Formal semantics
- Computational linguistics & NLP
- Machine learning & AI language models
- Information theory and communication

Mathematical linguistics transforms linguistic inquiry into a **formal science** with precise definitions, proofs, and predictions.

MATHEMATICAL LINGUISTICS: AIMS

- Provide **formal models** of linguistic structures
- Describe **grammatical rules** as logical systems
- Develop **algorithms** to parse and generate language
- Study **complexity and computability** in language
- Understand **probabilistic structure** of linguistic input
- Support **machine processing of language**

MATHEMATICAL LINGUISTICS: KEY RESEARCH AREAS

Area

Focus

Formal grammars	Chomsky hierarchy; context-free grammar, regular grammar
Automata theory	Finite-state machines, pushdown automata
Computability theory	What aspects of language can be computed?
Algorithmic linguistics	Parsing, generation, optimization
Formal semantics	Logic-based meaning representation
Information theory	Quantifying information and linguistic entropy
Probability & statistics	Language modeling, frequency analysis
Complexity theory	Measuring difficulty of linguistic structures

MATHEMATICAL LINGUISTICS: METHODS

Method

Description

Formal proofs	Demonstrating grammatical properties using logic
Automata simulation	Modeling computational recognition of sentences
Probabilistic modeling	Statistical prediction of language behavior
Information theory metrics	Entropy, perplexity, redundancy
Graph theory	Structural models of syntax and networks
Corpus-based frequency analysis	Observing quantitative patterns
Neural representation mathematics	Linear algebra, tensor calculus, embeddings

MATHEMATICAL LINGUISTICS: PRACTICAL APPLICATIONS

Field

Application

Machine translation

Grammar formalisms, language models

AI & NLP

Foundation of neural architecture training

Speech recognition

Probabilistic models, signal modeling

Cognitive science

Computational theories of mind

Cybersecurity

Linguistic pattern modeling

Education

Grammar-checking systems, automated scoring

Military & crisis linguistics

Signal intelligence, coded communication

COGNITIVE LINGUISTICS

Cognitive linguistics is the branch of linguistic science that views language as part of general human cognition. It investigates **how linguistic structures reflect conceptual organization, perception, and embodied experience**.

It stands in contrast to formalist models that treat grammar as an autonomous symbolic system; instead, cognitive linguistics argues that grammar and meaning emerge from **usage, categorization, and mental imagery**.

Main research questions:

- How do humans conceptualize the world through language?
- What cognitive mechanisms (metaphor, categorization, schemas) shape meaning?
- How does experience and embodiment influence linguistic structure?
- How do mental representations of events, space, and time become linguistic expressions?

Cognitive linguistics draws from **psychology, philosophy, neuroscience, and artificial intelligence**, and overlaps with psycholinguistics and semantics.

COGNITIVE LINGUISTICS: AIMS

- Explain the relationship between **language, thought, and experience**.
- Reveal **conceptual structures** underlying linguistic expressions.
- Model **mental imagery, categorization, and metaphor** in linguistic meaning.
- Demonstrate that grammar is **conceptually motivated** rather than arbitrary.
- Provide cognitive explanations for language learning and change.

Cognitive linguistics sees language as a **window into the human mind**.

COGNITIVE LINGUISTICS: KEY RESEARCH AREAS

Research Area	Core Tasks
Conceptual metaphor theory	Identify mappings between conceptual domains (e.g., <i>time is money</i>)
Embodiment	Study how bodily experience structures meaning
Categorization & prototypes	Explore mental categories and typical members
Image schemas	Model recurring spatial and sensory patterns (e.g., <i>path</i> , <i>container</i>)
Conceptual blending	Analyze how ideas combine in mental spaces
Frame semantics	Map knowledge structures and contextual meaning
Construction grammar	Describe grammatical patterns as form–meaning pairings
Usage-based models	Investigate learning from frequency and context
Metonymy & polysemy	Analyze contextual meaning shifts and conceptual relations

COGNITIVE LINGUISTICS: METHODS

Method	Description
Introspective analysis	Identify conceptual structures via linguistic evidence
Corpus linguistics	Analyze metaphor, collocations, frequency of constructions
Experimental methods	Reaction time, priming, categorization tasks
Neurocognitive studies	fMRI/EEG mapping of semantic and metaphor processing
Computational modeling	Simulate conceptual mapping and learning
Cross-linguistic comparison	Study universals and cultural variation
Discourse analysis	Examine conceptual frames in texts and speech

COGNITIVE LINGUISTICS: PRACTICAL APPLICATIONS

Field

Example Applications

Education	Teaching metaphor awareness, conceptual fluency
Translation	Mapping conceptual metaphors across cultures
Intercultural communication	Understanding divergent cognitive frames
Psychotherapy & narrative analysis	Identifying metaphors of trauma and growth
Discourse studies	Analyzing ideological framing in media
AI & computational semantics	Conceptual mapping for reasoning systems
Language revitalization	Documenting worldview encoded in endangered languages

COGNITIVE LINGUISTICS: PRACTICAL APPLICATIONS

- Replaced the abstract view of grammar with a **meaning-driven model**.
- Revealed how **metaphor and embodiment** structure thought.
- Unified semantics, grammar, and pragmatics under cognition.
- Connected linguistic theory to **neuroscience and psychology**.
- Advanced **usage-based models** for language acquisition and change.
- Provided tools for **cross-cultural and intercultural analysis**.
- Strengthened linguistic applications in **education, therapy, and AI semantics**.

THEORETICAL LINGUISTICS

Theoretical linguistics is the branch of linguistics devoted to **developing formal models of linguistic knowledge and structure**. It seeks to identify the fundamental principles and components that define human language as a system.

It focuses on answering:

- What knowledge do speakers possess that enables language use?
- How is this knowledge represented mentally?
- What universal properties do all human languages share?
- What rules or principles underlie linguistic structure?

It contrasts with applied linguistics by emphasizing **explanation, abstraction, and formal theory**, not direct practical applications.

Core domains:

- Phonology
- Morphology
- Syntax
- Semantics
- Pragmatics

THEORETICAL LINGUISTICS: AIMS

- Develop **abstract descriptions** of linguistic systems.
- Construct **formal models** for linguistic knowledge.
- Explain **grammatical structure, meaning, and use**.
- Discover **universal properties** across languages.
- Understand **mental mechanisms** of language competence.

Theoretical linguistics pursues **what language is**, while applied linguistics asks **what we do with language knowledge**.

THEORETICAL LINGUISTICS: KEY RESEARCH TASKS

Task

Focus

Defining linguistic competence

What native speakers know intuitively

Building grammatical theories

Generative systems, rules, constraints

Identifying universals

Cross-linguistic laws and tendencies

Modeling linguistic
representation

Mental grammar, modularity

Explaining variation

Within a unified theoretical framework

Formalizing meaning

Semantic structures and truth
conditions

THEORETICAL LINGUISTICS: METHODS

Method	Description
Introspective analysis	Intuition-based judgments about grammaticality
Formal modeling	Rules, constraints, derivations
Typological comparison	Cross-language structural generalizations
Corpus evidence	Frequency patterns and syntactic distributions
Psycholinguistic evidence	Processing support for theory
Computational simulation	Testing linguistic rules algorithmically

THEORETICAL LINGUISTICS: PRACTICAL APPLICATIONS

- Language description, documentation
- Computational parsing & MT models
- NLP grammar frameworks
- Speech recognition & assistive tech
- Advanced language rehabilitation approaches
- Teacher training in grammatical theory

COMPARATIVE LINGUISTICS

Comparative linguistics (also called *comparative-historical linguistics*) investigates **relationships between languages** by comparing their structures to determine:

- Whether languages share a common ancestor
- How languages diverge over time
- Which systematic sound and grammar correspondences exist
- What reconstructed **proto-forms and proto-languages** looked like

While **historical linguistics** studies language change broadly, **comparative linguistics specifically reconstructs and compares languages** to build genealogical classification systems.

COMPARATIVE LINGUISTICS: AIMS

- Establish **genetic relationships** among languages
- Reconstruct **proto-languages** and earlier stages
- Identify **sound laws** and morphological correspondences
- Explain **linguistic evolution and divergence**
- Trace **migration & contact patterns** through language

COMPARATIVE LINGUISTICS: KEY RESEARCH TASKS

Domain

Research Tasks

Identify cognates

Compare shared inherited words

Reconstruct proto-forms

Deduce ancient roots through regular sound patterns

Establish sound laws

Identify systematic phonological correspondences

Determine language families

Classify languages genealogically

Distinguish borrowing vs inheritance

Separate true cognates from loanwords

Trace morphological evolution

Follow changes in inflection and word formation

Reconstruct syntax

Hypothesize earlier word-order patterns

COMPARATIVE LINGUISTICS: METHODS

Method	Description
Comparative method	Systematic comparison of cognates to reconstruct proto-forms
Internal reconstruction	Analyze irregularities within one language to infer earlier forms
Etymology	Trace word origins and transformations
Phonological reconstruction	Apply sound laws to rebuild proto-phonemes
Morphological reconstruction	Identify inherited vs innovative morphology
Lexicostatistics / glottochronology	Statistical estimation of divergence time (controversial)
Phylogenetic modeling	Computational modeling of linguistic evolution
Archaeolinguistics	Combine archaeology and linguistics

COMPARATIVE LINGUISTICS: PRACTICAL APPLICATIONS

- Reconstruction of **Proto-Indo-European**
- Understanding of **migration and settlement patterns**
- Decipherment of ancient languages (*Hittite, Tocharian*)
- Development of **phonological and morphological theory**
- Growth of **typology and areal linguistics**
- Foundations for **machine translation and language classification models**
- Strengthening **cultural identity through linguistic heritage**

COMPARATIVE LINGUISTICS: PRACTICAL APPLICATIONS

- Dictionary and terminology history
- Language revitalization and heritage studies
- Cultural diplomacy and identity strengthening
- Criminology & forensic genealogy (language as clue)
- Education: grounding language teaching in linguistic history
- Computational phylogeny models in AI

ANTHROPOLOGICAL LINGUISTICS

Anthropological linguistics is the study of the relationship between **language, culture, and human society**, grounded in the tradition of anthropology. It investigates how language shapes cultural practices, social structures, worldview, and identity, and how cultural dynamics influence linguistic behavior.

It addresses questions such as:

- How do language and culture co-evolve?
- How does language encode knowledge, values, and social categories?
- What can language tell us about human origins, migration, and cognition?
- How do endangered languages store cultural memory and heritage?
- How do ritual, oral tradition, and narrative shape identity?

Anthropological linguistics overlaps with **sociolinguistics, ethnolinguistics, cultural anthropology, discourse studies, and linguistic anthropology** (modern U.S. term).

ANTHROPOLOGICAL LINGUISTICS: AIMS

To understand language as:

- A **cultural resource**
- A vehicle of **collective memory & identity**
- A tool of **social organization**
- A **symbolic system** embedded in traditions and knowledge
- A key to **worldview (linguistic relativity)**

It seeks to describe and interpret language in **natural social and cultural contexts**, often through long-term fieldwork.

ANTHROPOLOGICAL LINGUISTICS: KEY RESEARCH TASKS

Focus	Tasks
Language & culture	Discover cultural patterns encoded in language
Ethnography of communication	Study ritual, greeting, narrative, politeness
Language & worldview	Explore how language shapes thought & perception
Language & identity	Examine ethnic, national, and group identity
Endangered languages	Document and revitalize vulnerable linguistic heritage
Oral tradition	Analyze folklore, myth, storytelling
Language contact	Study multilingual communities and language shift
Cognition & classification	How people categorize the world through language

ANTHROPOLOGICAL LINGUISTICS: METHODS

Method

Description

Participant observation

Immersion in the speech community

Ethnographic fieldwork

Long-term cultural & linguistic study

Discourse analysis

Examining narrative, ritual, conversation

Elicitation

Structured collection of linguistic data

Lexicography & ethnosemantics

Cultural vocabulary documentation

Audio/video documentation

Recording and archiving speech

Interviews & oral history

Narrative-based cultural research

Community collaboration

Participatory language revitalization

ANTHROPOLOGICAL LINGUISTICS: PRACTICAL APPLICATIONS

Field

Application

Cultural preservation

Documentation of oral traditions & rituals

Language revitalization

Rescuing endangered languages

Education

Multicultural and multilingual curriculum design

Peacebuilding

Language rights and cultural diplomacy

Migration studies

Cultural and linguistic adaptation

Public health

Ethnographic communication in crises

Trauma studies

Cultural narratives in healing & resilience

Military & humanitarian contexts

Cross-cultural communication in conflict zones

DISCOURSE ANALYSIS

Discourse Analysis is the study of **language in use beyond the sentence level**, focusing on how meaning is constructed in social, cultural, political, and interactional contexts. It investigates language as a form of action - a tool for performing identities, shaping power relations, creating social realities, and influencing thought.

Key research questions include:

- How do people **use language to communicate, persuade, or control**?
- How are **narratives, ideologies, and identities** constructed in discourse?
- How does cultural context shape meaning?
- How do institutions (media, government, education) use language strategically?
- How does discourse reflect and reproduce **power and inequality**?

Discourse analysis bridges **linguistics, sociology, psychology, anthropology, communication studies, and political science**.

DISCOURSE ANALYSIS: AIMS

- Understand **meaning in real communication**
- Reveal underlying **ideologies, values, power dynamics**
- Describe how people achieve **coherence, persuasion, and identity**
- Analyze how discourse shapes **social interpretation of events**
- Investigate **language as action**, not just form

DISCOURSE ANALYSIS: KEY RESEARCH TASKS

Domain

Tasks

Text & spoken discourse

Analyze coherence, cohesion, organization

Conversation analysis

Turn-taking, repair, politeness, interaction rules

Critical discourse analysis (CDA)

Reveal power, ideology, bias, dominance

Narrative analysis

Examine storytelling, identity construction

Political discourse

Analyze rhetoric, propaganda, framing

Institutional discourse

Legal, medical, academic communication

Media discourse

Study framing, representation, agenda-setting

Digital discourse

Social media language, multimodal meaning

DISCOURSE ANALYSIS: METHODS

Method	Description
Conversation analysis	Micro-analysis of interaction sequences
Pragmatic analysis	Speech acts, implicature, politeness
Thematic analysis	Identifying themes & patterns
Corpus-assisted discourse studies	Concordances, collocations
CDA	Power, ideology, representation

DISCOURSE ANALYSIS: PRACTICAL APPLICATIONS

- Peacebuilding & crisis communication
- Strategic communications & diplomacy
- Media bias identification and counter-disinformation
- Education & classroom discourse
- Clinical interventions — narrative therapy
- Veteran psychological support using **narrative reconstruction**
- AI conversational systems and sentiment analysis
- National identity studies (important for Ukraine)
- Digital governance and information security

CORPUS LINGUISTICS

Corpus linguistics is the empirical study of language based on **large, structured collections of real-life texts** known as corpora.

It uses computational and statistical methods to analyze patterns in authentic language use rather than invented examples.

Core principle:

Language patterns and rules can be discovered through systematic analysis of large text datasets.

Corpus linguistics examines:

- Word frequency and collocations
- Phraseology and grammar in use
- Register and genre variation
- Discourse and pragmatic patterns
- Language change across time
- Cross-linguistic and multilingual patterns

It underpins modern NLP, lexicography, translation, language teaching, and forensic analysis.

CORPUS LINGUISTICS: AIMS

- Provide **empirical evidence** for linguistic theories
- Identify **patterns, frequency, and variation** in language
- Study **actual usage vs prescriptive rules**
- Build reliable **dictionaries, teaching materials, and machine-learning datasets**
- Support **language description, standardization, and revitalization**

Corpus linguistics bridges **quantitative and qualitative research** and informs both theory and application.

CORPUS LINGUISTICS: AIMS

Task

Focus

Collect and annotate corpora

Metadata, tagging, cleaning language data

Analyze frequency

Common vs rare forms, Zipf's law

Study collocation patterns

Meaningful word associations

Identify phraseological units

Lexical bundles, idioms, multiword units

Track language change

Diachronic corpora

Investigate variation

Register, gender, region, professional language

Corpus-based discourse

Media, political rhetoric, digital communication

Cross-linguistic & parallel corpora

Translation studies, MT training

CORPUS LINGUISTICS: METHODS

Method

Description

Quantitative analysis	Frequency, collocations, statistical significance
Qualitative concordance analysis	Close reading of usage contexts
Annotation tools	POS tagging, lemmatization, dependency parsing
Statistical modeling	Mutual information, t-score, log-likelihood
Keyword analysis	Comparing corpora across genres or groups
Visualization	Dispersion plots, word clouds, frequency graphs

CORPUS LINGUISTICS: PRACTICAL APPLICATIONS

Domain

Application

Language teaching	Materials based on authentic usage
Translation & interpreting	Parallel corpora, terminology extraction
AI & NLP	MT, speech recognition, LLM training
Journalism & media	Framing & bias studies
Forensics	Authorship analysis, linguistic profiling
Military linguistics	Command language and operational communication analysis
Sociolinguistics	Variation studies
Healthcare	Clinical communication research
Psychology	Trauma narrative corpus studies

STYLISTICS

Stylistics is the scientific study of **style in language**, examining how linguistic choices create particular effects, meanings, and responses. It bridges **linguistics, literature, rhetoric, psychology, and communication**, analyzing how writers and speakers use language creatively and strategically.

Stylistics studies:

- Literary texts
- Media and political speech
- Advertising and digital communication
- Public speeches and legal discourse
- Everyday language use

Central concern:

How do specific language forms produce specific meanings, emotions, and rhetorical effects?

STYLISTICS: AIMS

- Describe **linguistic features** of texts
- Explain how they produce **aesthetic, persuasive, emotional, or cognitive effects**
- Connect **form and meaning** in discourse
- Understand **authorial intent and reader response**
- Develop analytical skills transferable to teaching, translation, media, and public communication

Stylistics builds **awareness and mastery** of language use.

STYLISTICS: KEY RESEARCH TASKS

Task

Focus

Analyze stylistic devices

Metaphor, irony, repetition, parallelism

Identify genre conventions

Academic, journalistic, poetic, legal

Study register & tone

Formality, politeness, emotional tone

Describe narrative style

Perspective, voice, cohesion

Evaluate aesthetic effects

Poetic imagery, rhythm, sound symbolism

Interpret rhetorical strategies

Persuasion, argumentation, appeal

Investigate cognitive & emotional impact

Reader's response, frame activation

Analyze multimodal style

Visual + verbal discourse (ads, digital media)

STYLISTICS: METHODS

Method

Description

Close reading

Detailed text interpretation

Quantitative stylistics

Frequency, keywords, collocation analysis

Corpus stylistics

Computer-assisted literary analysis

Cognitive stylistics

Reader's mental processing & emotions

Pragmatic stylistics

Speech acts, implicature, politeness

Narratology

Narrative structure & point of view

Rhetorical analysis

Persuasive devices, ethos/logos/pathos

Functional stylistics

Genre and register variation

STYLISTICS: PRACTICAL APPLICATIONS

Field	Application
Education	Literature teaching, writing skills
Translation	Style transfer, maintaining tone & voice
Editing & journalism	Clarity, tone adaptation
Advertising	Engaging messaging and branding
Political communication	Persuasion strategies
Marketing & PR	Emotional targeting, narrative framing
Clinical psychology	Narrative therapy & trauma discourse
Forensics	Authorship profiling, plagiarism detection
AI language design	Style control & tone calibration

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