Logic in linguistics: an introduction

Logic: from <Greek> Logike techne, = the art of thinking
originally: the study of the laws of thinking
today: the study of valid conclusions, science of reasoning

• precursor: Plato, argumentation (argument – counterargument)
• "founder" of logic: Aristotle, syllogistics
Syllogism: operation that leads from two premises to a conclusion
• influential for scholasticism, later for Leibniz, Kant
• founder of modern logic: Frege (symbolic logic)

→ a formal approach to sentences away from their grammatical and semantic shape
→ any sentence can be transformed into elementary sentences via logical analysis
(logical atomism; Russell, Wittgenstein)

Logic and language: relationship and position

Language enables deduction and induction
1) logic and language share properties:
• are cognitive abilities
• have intentionality (are about something)
• are therefore essentially symbolic
• use interaction of syntax, semantics, pragmatics

2) logic and language differ:
• statements of logic are universal, hold across time and space and mode of transmission
• syntax in logic: the way from premises to conclusions supported by rigidly defined symbols and rules that enable valid conclusions
• semantics in logic: focus on truth, reference, meaning
• logical form: underlying form that represents meaning