
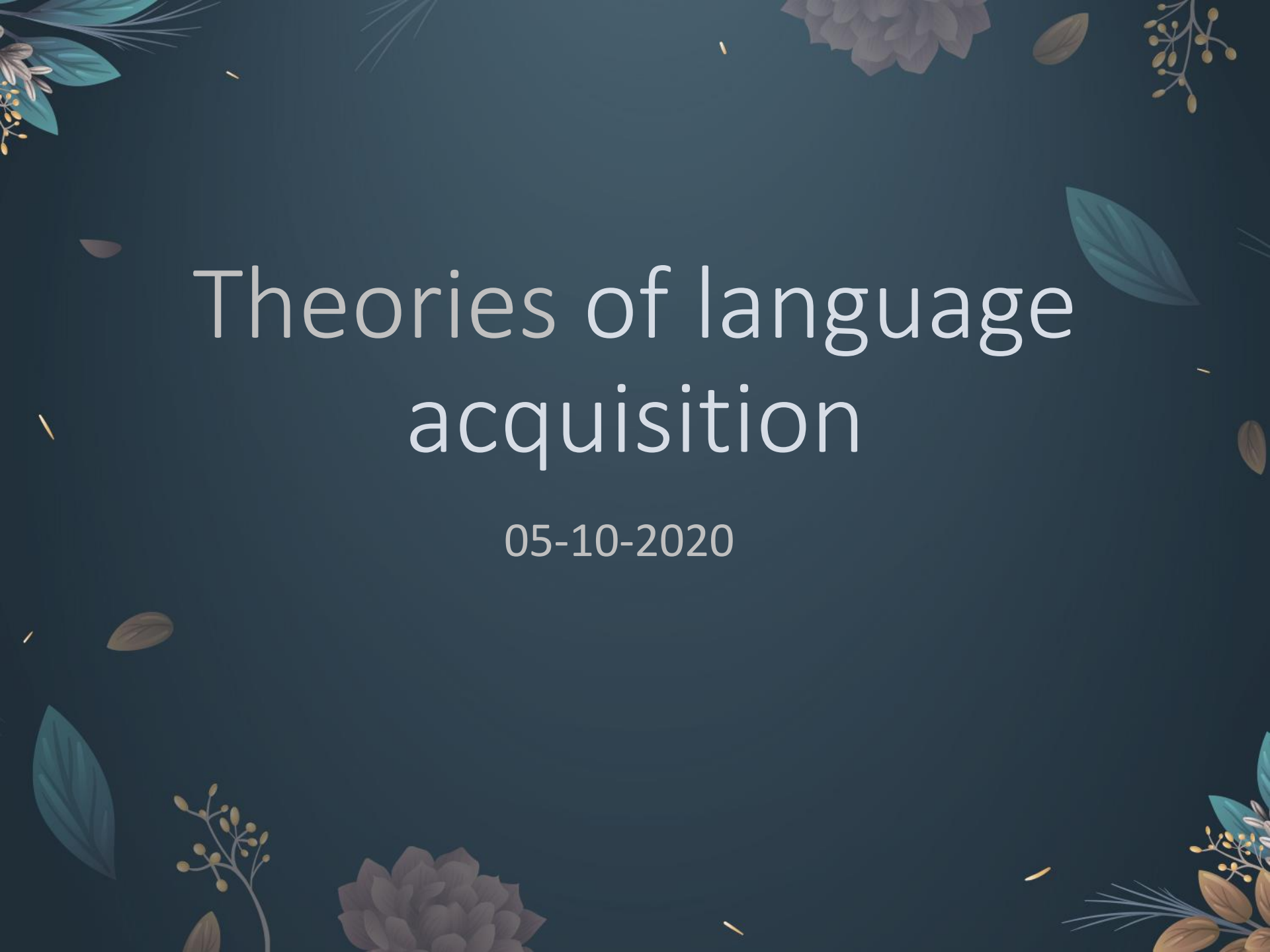


How do humans
acquire
language
?



Theories of language acquisition

05-10-2020

A decorative border of various botanical elements including leaves, flowers, and seed pods in shades of teal, brown, and gold, set against a dark blue background.

Theories of language acquisition

05-10-2020

Scoring Policy Module 01

Написание теста / терминологического диктанта	Написание эссе	Подготовка тематических презентаций по согласованию с преподавателем
Dictation / Test (#1) = up to 5 scores	Placement essay = 1 score	1 presentation = 5 scores
Dictation / Test (#2) = up to 5 scores	Analytical essay = up to 10 scores	Соблюдайте требования к эссе и презентации!

Analytical Trial Essay Structure (2,000 words)

- iv. Elicit and state the common features of two methods / conceptions (a block diagram).
- v. Elicit and state the differences of two methods or matters under study.
- vi. Show advantages and disadvantages of the two compared methods / conceptions.
- vii. Provide a Comparison table.
- viii. Provide the two methods or concepts compatibility analysis.
- ix. **Conclusion.** Pinpoint key results. State the limitations of your study.
- x. **References**

Analytical Trial Essay Structure (2,000 words)

i. The concept of the method of scientific research / language / linguistics / language acquisition (language learning or something...). State the problem and the task of your Research.

\ Provide context and standard criteria for its evaluation.

ii. Analytical description of method / concept / approach/ point of view 1.

(Highlight Key principles and Features. Be specific. Citing is welcome. Quoting must be followed by analysis. Describe your analytical tools. Provide enough examples.)

iii. Analytical description of method / concept / approach/ point of view 2.

(Highlight Key principles and Features. Be specific. Citing is welcome. Quoting must be followed by analysis. Describe your analytical tools. Provide enough examples.)

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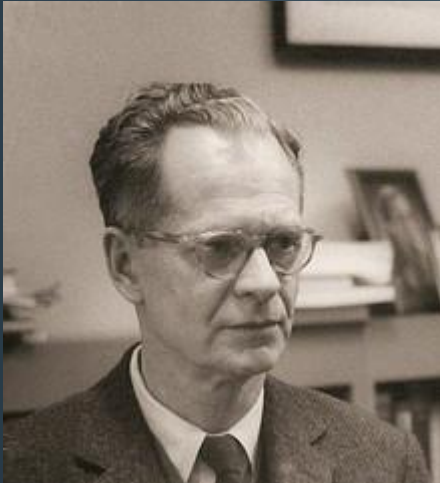
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Critical Phase Hypothesis (Lennenberg)

Set of Theories

- Interactionalist theory
- Behaviorist theory
- Innatist theory
- Cognitive theory

Skinner – Behaviourist Theory



Burrhus Frederic Skinner (March 20, 1904 – August 18, 1990) was an American psychologist, behaviorist, author, inventor, and social philosopher.

operant ['ɒp(ə)r(ə)nt]

Skinner – Behaviourist Theory

Operant Conditioning

- (also called instrumental conditioning) is a type of associative learning process through which the strength of a behavior is modified by **reinforcement** or punishment.
- It is also a procedure that is used to bring about such learning.

operant ['ɒp(ə)r(ə)nt]

Skinner – Behaviourist Theory

Operant Conditioning

- ✓ стимулированная приспособительная реакция;
- ✓ стимулированное адаптивное поведение;
- ✓ выработка инструментального условного рефлекса.

Skinner – Behaviourist Theory

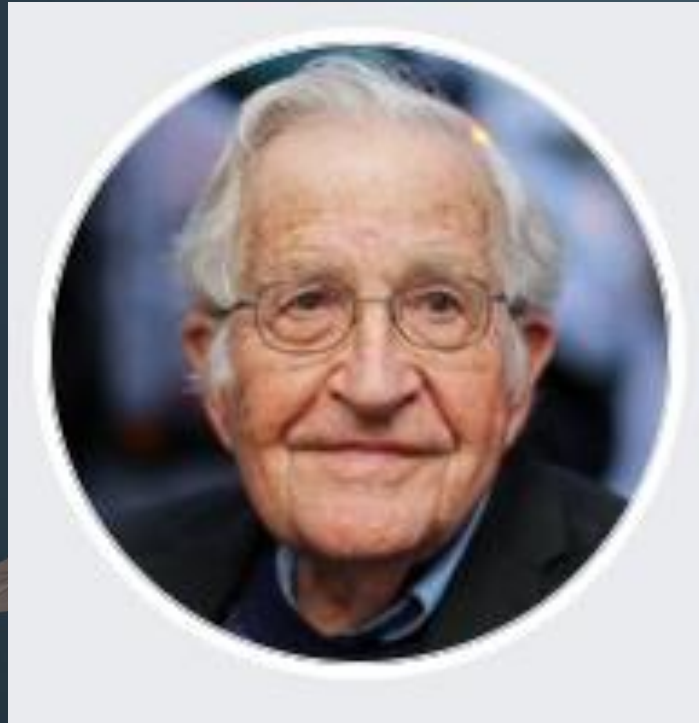
- ✓ Skinner believed that the idea of ‘operant conditioning’ could be extended to human behaviour and could account for language acquisition
- ✓ Believed that language is a ‘set of habits’
- ✓ Performed research on rats and pigeons by use of reinforcement

Operant Conditioning

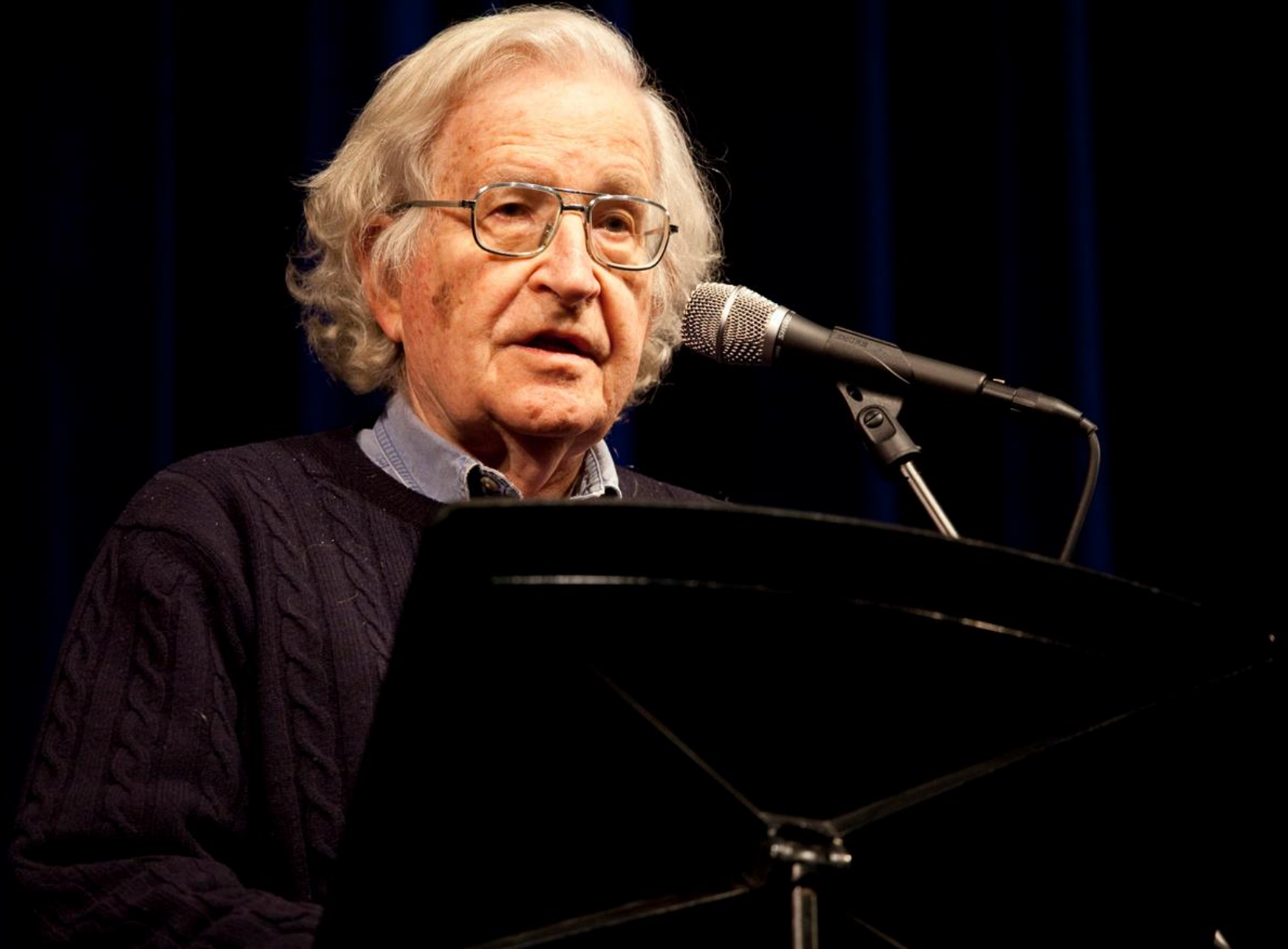
Children learn language by way of imitating adults thus, adults function as models of correct grammar and structures

- If the child uses language correctly, this is reinforced by the adult's approval.
- Flawed attempts are met with disapproval, which equates with punishment/negative reinforcement.
- Skinner's theory promotes the importance of adults in modelling language.
- However his theory is simplistic, he never studied children and Brown's research found that **adults** tend to approve children's utterances which are true rather than grammatically correct.

Avram Noam Chomsky (born 1928),
"the father of modern linguistics"



Avram Noam Chomsky (born 1928),
"the father of modern linguistics"





Avram Noam Chomsky (born 1928)

Avram Noam Chomsky (born December 7, 1928) is an American linguist, philosopher, cognitive scientist, historian, social critic, and political activist. Sometimes called "the father of modern linguistics", Chomsky is also a major figure in analytic philosophy, and is one of the founders of the field of cognitive science.

Noam Chomsky asserts that language is innate

- He wrote his famous book, “Language and Mind” in 1972, in which he proposed his famous theories on language acquisition. In this book Chomsky wrote, “When we study human language, we are approaching what some might call the ‘human essence,’ the distinctive qualities of mind that are, so far as we know, unique to man.” According to Chomsky, language is one characteristic that is unique to humans among all other living beings. Chomsky’s theories have made it easier to understand the evolution and development of the languages.

Noam Chomsky – Innatist Theory

- **Reaction to Skinner**
- Believes his theory is flawed as adults don't speak grammatically correct all the time
- Came up with the idea of **LAD**
- Because much stimulus is impoverished, children have an innate knowledge of linguistic universals
- The child listens to the rules of language surrounding him/her and learns the rules

Continued

- By the age of 4 children know the rules, which have been learned through trial and error
- Rules allow linguistic creativity
- Children are naturally predisposed to learn language provided that they have an adequate linguistic environment
- Argues that input is ‘impoverished’ – interactionalists argue that the type of CDS addressed to children is extremely important.

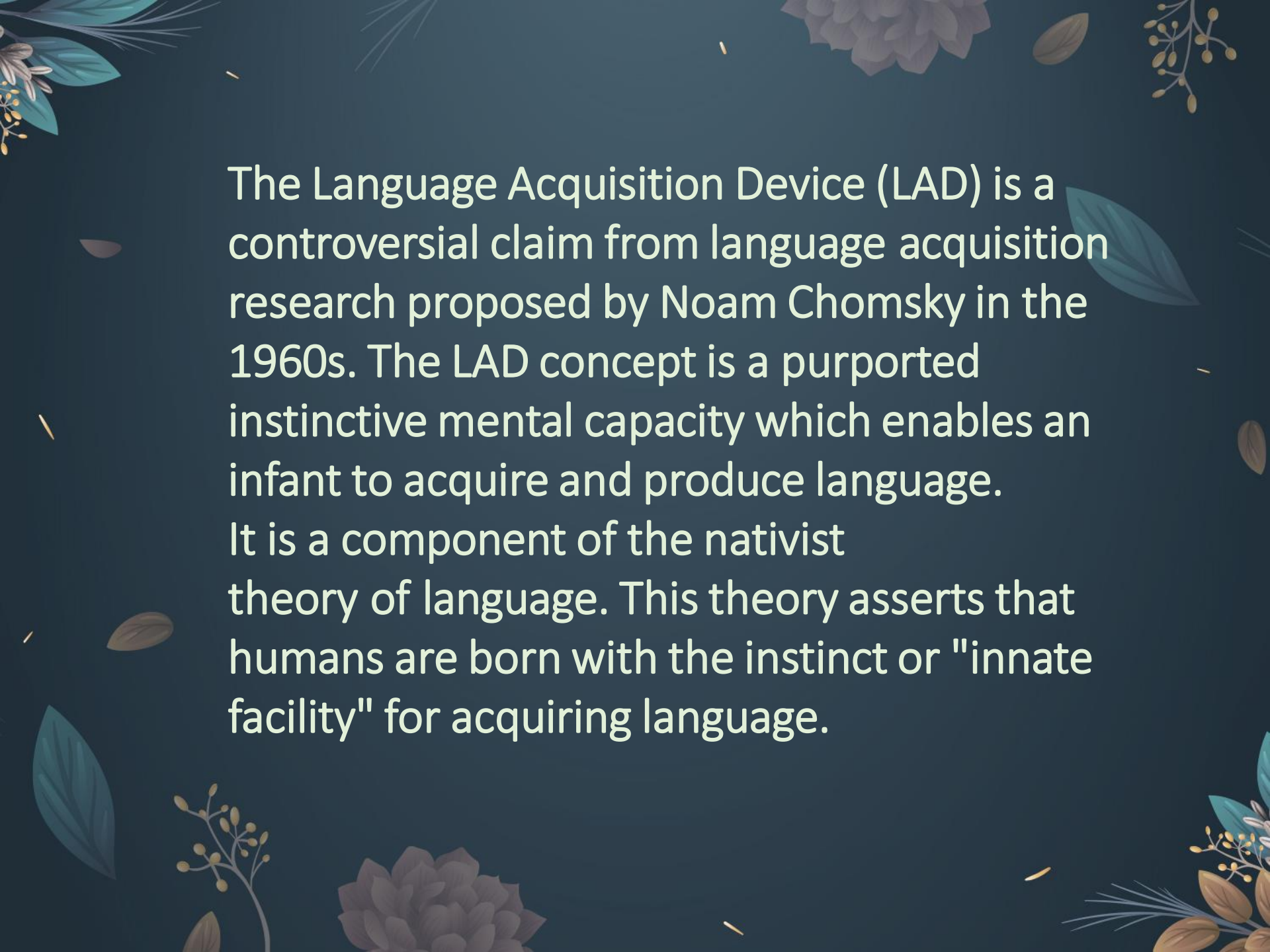
LAD and LASS are theories by cognitive theorists Chomsky and Bruner

LAD (Noam Chomsky)

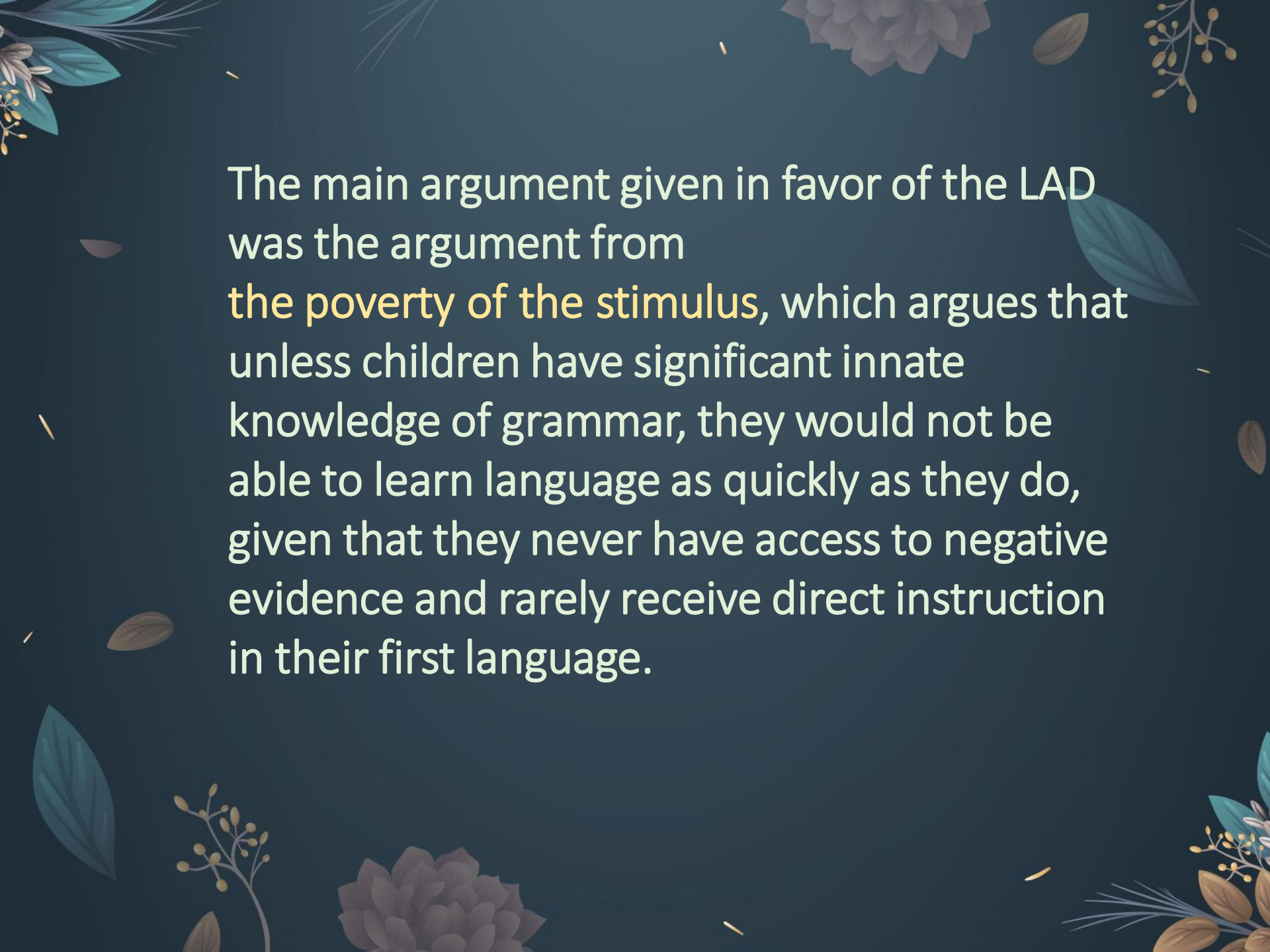
LAD stands for **Language Acquisition Device**

In this theory, Chomsky argues that the linguistic development for children is innate, meaning all children are born with it

This is proved by the similarities between completely different languages, so for example, all children use the 'SUBJECT-VERB-OBJECT' structure...



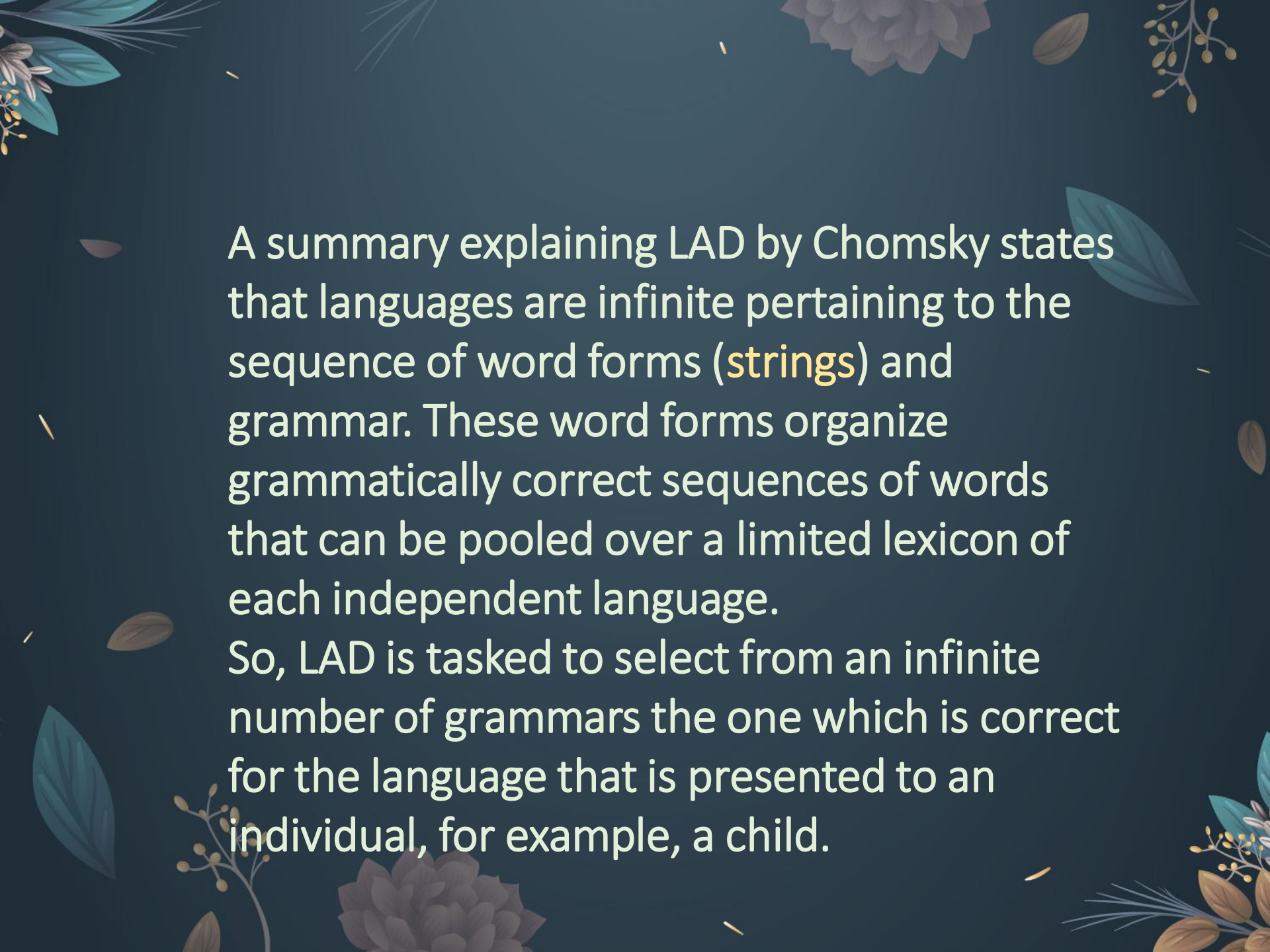
The Language Acquisition Device (LAD) is a controversial claim from language acquisition research proposed by Noam Chomsky in the 1960s. The LAD concept is a purported instinctive mental capacity which enables an infant to acquire and produce language. It is a component of the nativist theory of language. This theory asserts that humans are born with the instinct or "innate facility" for acquiring language.



The main argument given in favor of the LAD was the argument from **the poverty of the stimulus**, which argues that unless children have significant innate knowledge of grammar, they would not be able to learn language as quickly as they do, given that they never have access to negative evidence and rarely receive direct instruction in their first language.

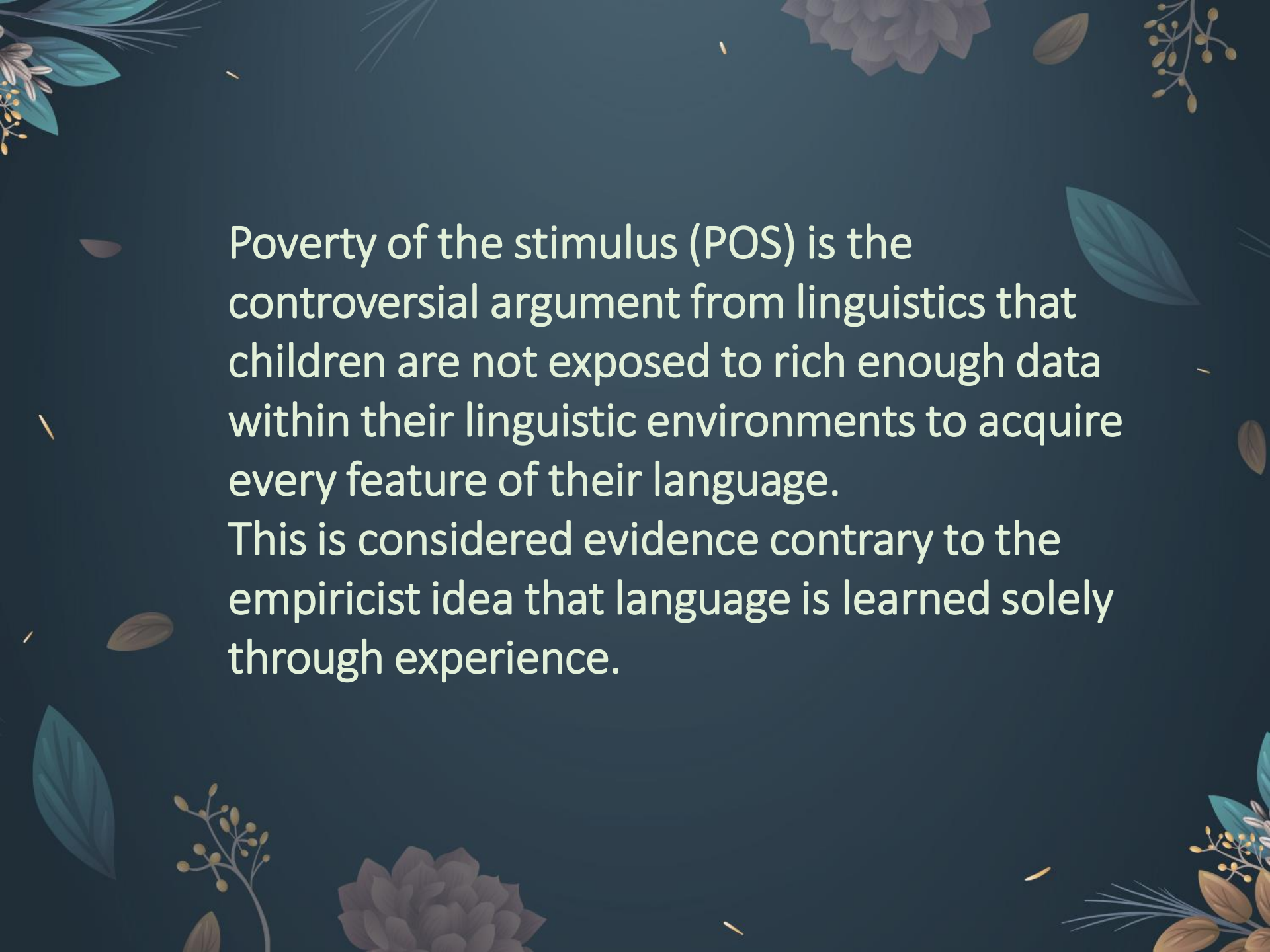
An argument from the poverty of the stimulus structure

- The speech that children are exposed to is consistent with numerous possible grammars.
- It is possible to define data, D , that would distinguish the target grammar from all other grammars that are consistent with the input.
- D is missing from speech to children.
- Children nonetheless acquire the target grammar.
- Therefore, the right grammatical structure arises due to some (possibly linguistic) property of the child.



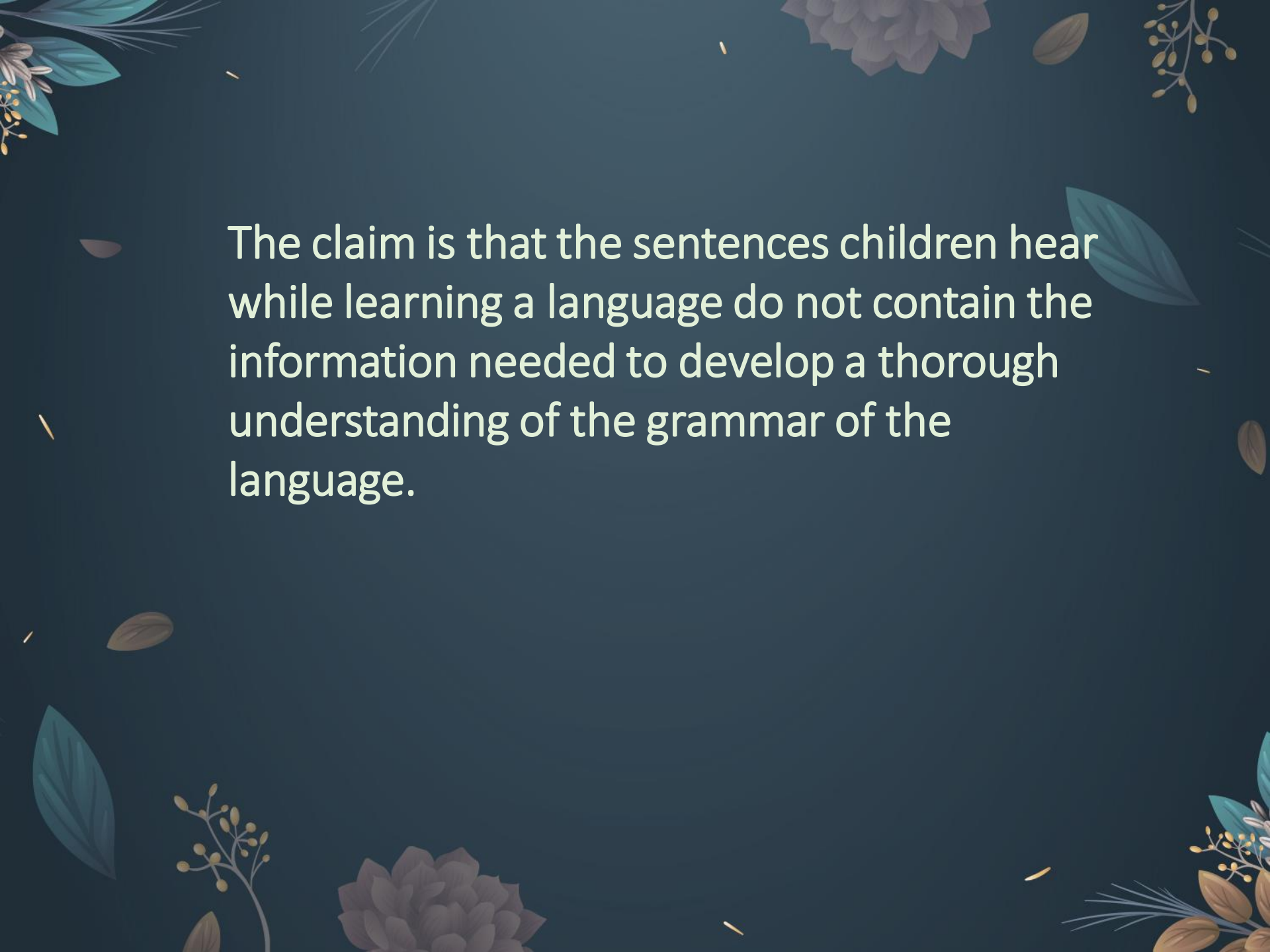
A summary explaining LAD by Chomsky states that languages are infinite pertaining to the sequence of word forms (**strings**) and grammar. These word forms organize grammatically correct sequences of words that can be pooled over a limited lexicon of each independent language.

So, LAD is tasked to select from an infinite number of grammars the one which is correct for the language that is presented to an individual, for example, a child.

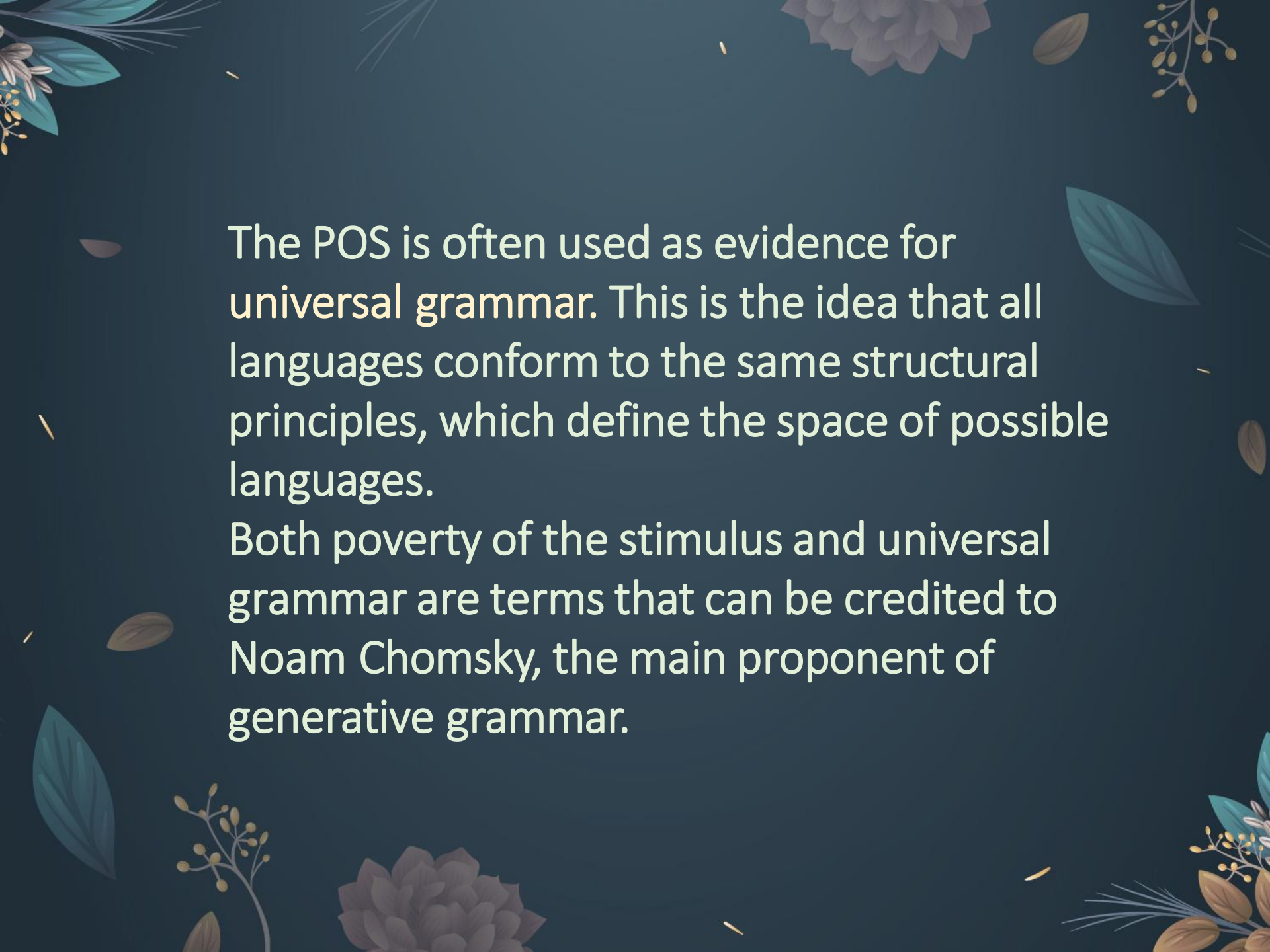
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Poverty of the stimulus (POS) is the controversial argument from linguistics that children are not exposed to rich enough data within their linguistic environments to acquire every feature of their language.

This is considered evidence contrary to the empiricist idea that language is learned solely through experience.

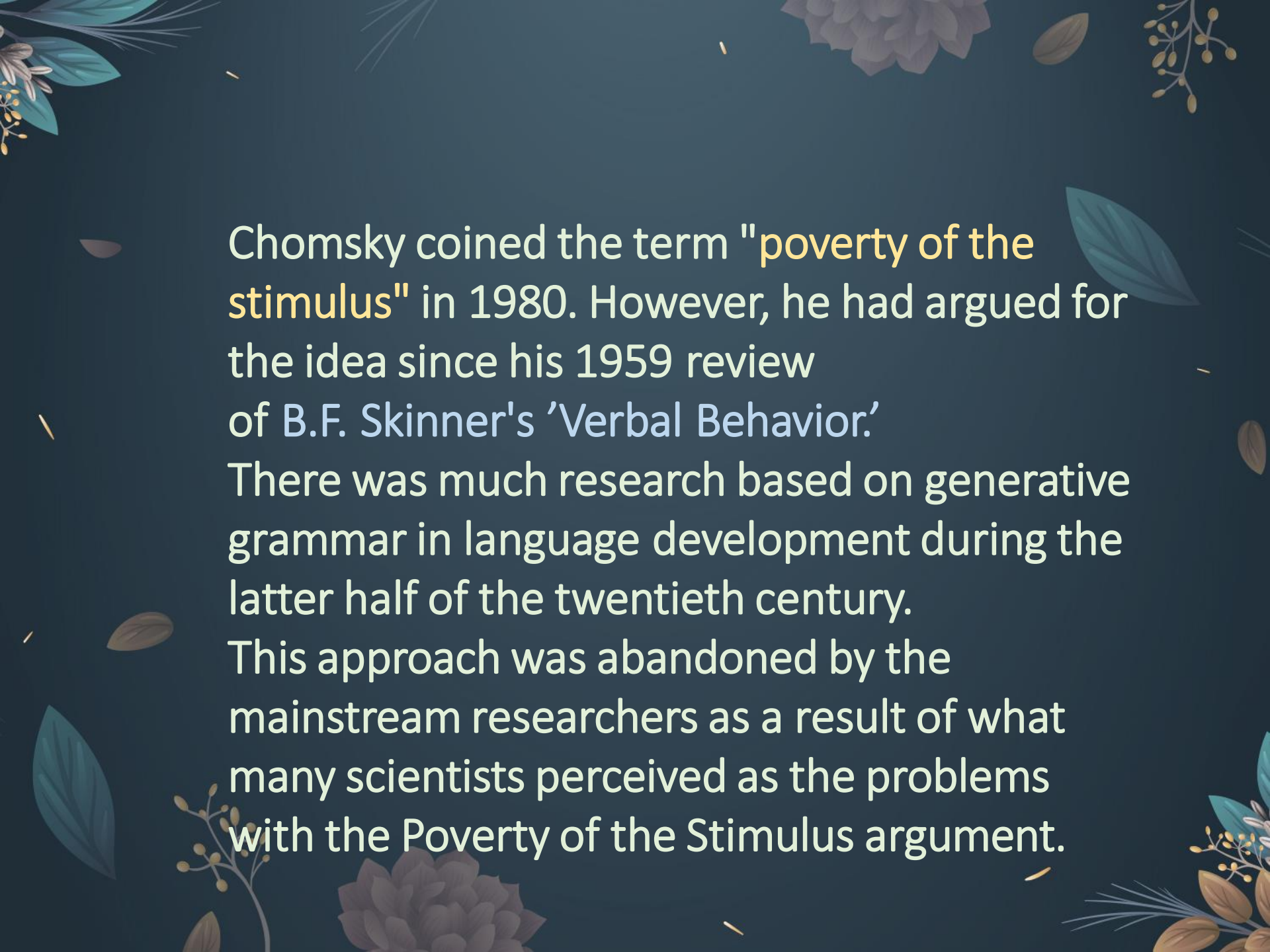


The claim is that the sentences children hear while learning a language do not contain the information needed to develop a thorough understanding of the grammar of the language.



The POS is often used as evidence for universal grammar. This is the idea that all languages conform to the same structural principles, which define the space of possible languages.

Both poverty of the stimulus and universal grammar are terms that can be credited to Noam Chomsky, the main proponent of generative grammar.



Chomsky coined the term "**poverty of the stimulus**" in 1980. However, he had argued for the idea since his 1959 review of B.F. Skinner's 'Verbal Behavior.'

There was much research based on generative grammar in language development during the latter half of the twentieth century.

This approach was abandoned by the mainstream researchers as a result of what many scientists perceived as the problems with the Poverty of the Stimulus argument.

Criticism

Critics demonstrated in the 1980s and 1990s that Chomsky's purported linguistic evidence for poverty of the stimulus may have been false. Around the same time there was research in applied linguistics and neuroscience that rejected the idea of languages being innate and not learned. These developments led to the abandonment of **innatism** by the mainstream child language acquisition community, with generative grammar being pushed into the margins.

Piaget and Vygotsky – Cognitive Theory



Piaget and Vygotsky – Cognitive Theory

- Children need to develop cognitively to allow language acquisition
- Piaget: language drives thought
- Vygotsky: thought drives language
- Both emphasise the idea that language can influence learning
- Vygotsky argues that the 'zone of proximal development' is still influential in the psychology of education
- Believe that children need to talk to people in order to learn

Piaget and Vygotsky – Cognitive Theory

- Vygotsky, a Russian psychologist, created a model of human development now called **the sociocultural model**.
- He believed that all cultural development in children is visible in two stages. First, the child observes the interaction between other people and then the behavior develops inside the child. This means that the child first observes the adults around him communicating amongst themselves and then later develops the ability himself to communicate.
- Vygotsky also theorized that a child learns best when interacting with those around him to solve a problem. At first, the adult interacting with the child is responsible for leading the child, and eventually, the child becomes more capable of problem solving on his own. This is true with language, as the adult first talks at the child and eventually the child learns to respond in turn.

Piaget and Vygotsky – Cognitive Theory

- The child moves from gurgling to **'BABY TALK'** to more complete and correct sentences. Bruner, best known for his **discovery learning theory**, believes that learners, whether they are adults or children, learn best when they discover knowledge for themselves.
- He believes that students retain knowledge best when it is something they have discovered on their own. Bruner argues that an adult and an infant have **conversations** despite the child being unable to speak. **The interaction** between the two, such as games and non-verbal communication, **build the structure of language** long before the child is able to communicate verbally.

Swiss psychologist Jean Piaget (1896-1980)



Jean Piaget (UK: /pi'æʒeɪ/,
US: /,pi:ə'ʒeɪ, pjɑ:'ʒeɪ/
French: [ʒɑ̃ pjazɛ];
(9 August 1896 – 16
September 1980) was a Swiss
psychologist known for his
work on child development.
Piaget's theory of cognitive dev
elopment and epistemological
view are together called
"genetic epistemology.

Swiss psychologist Jean Piaget (1896-1980)

Piaget's
Theory of
Cognitive
Development

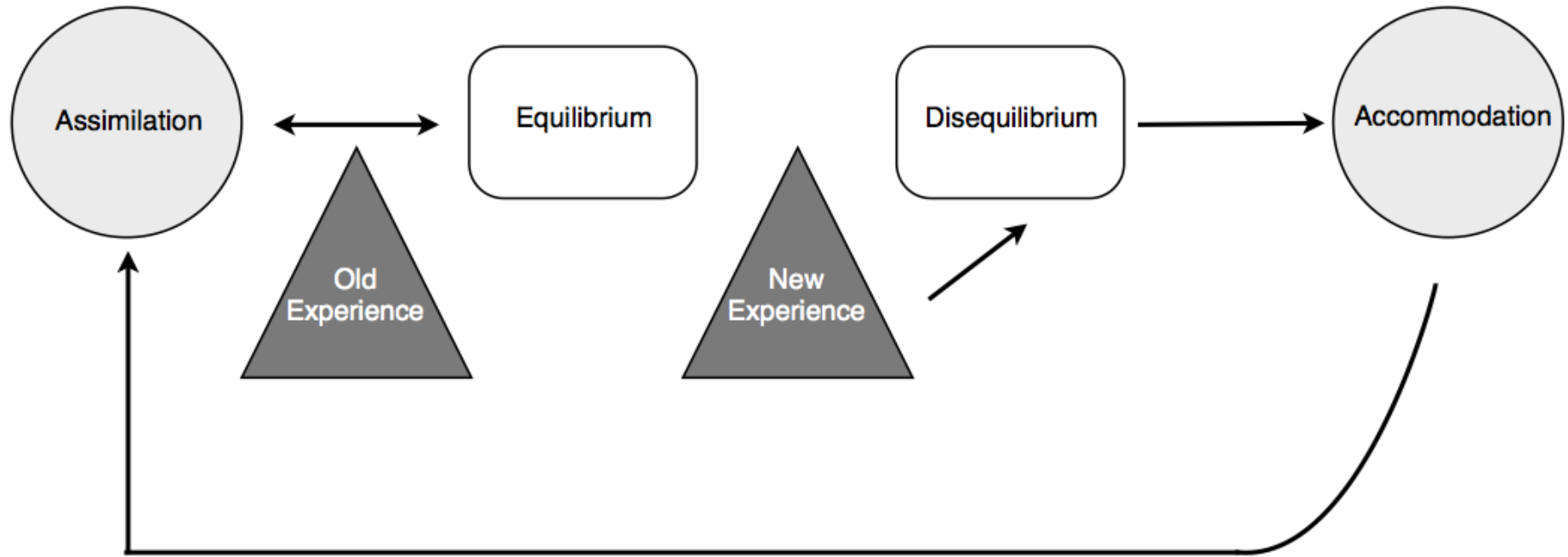


Piaget and Vygotsky – Cognitive Theory

Read about
Vygotsky
and Piaget
Scientific
Concepts



Swiss psychologist Jean Piaget (1896-1980)

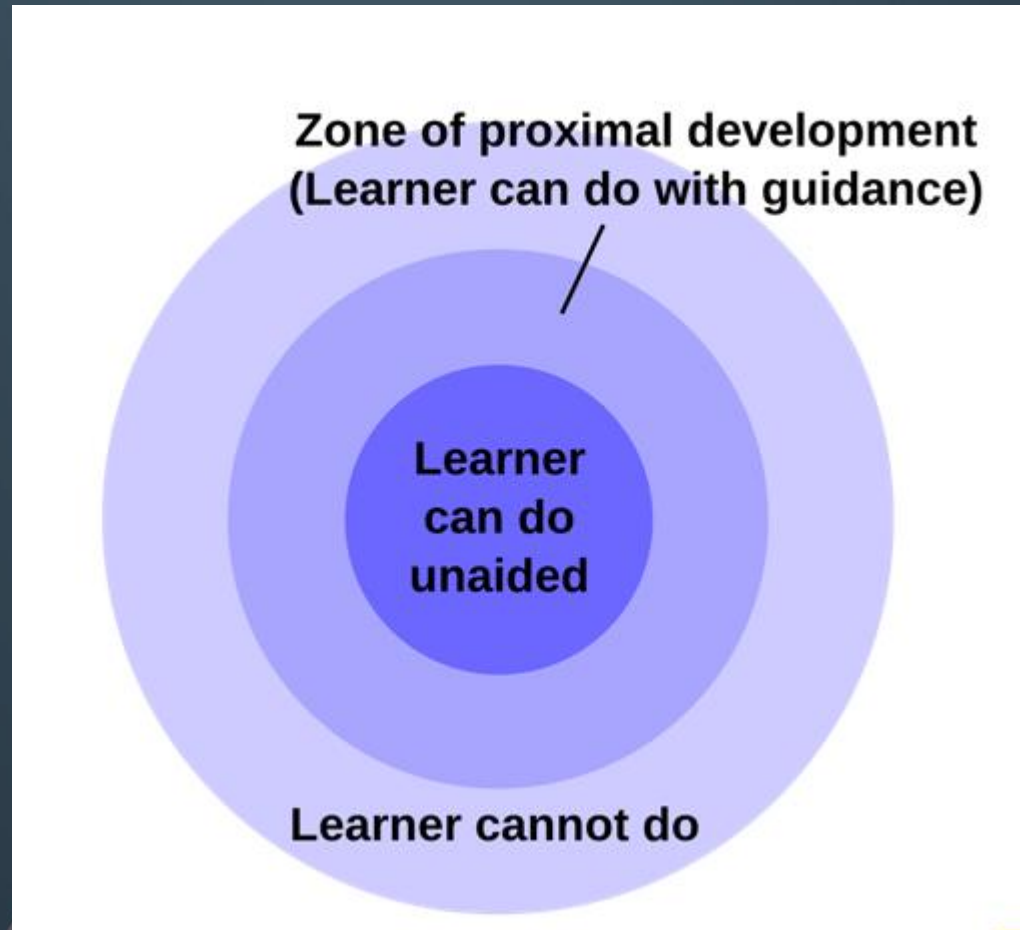


Russian psychologist Lev Vygotsky (1896-1934)

was the author of the **theory** of cognitive development called “the **sociocultural theory.**” Lev Vygotsky studied the mental development of children, including how they play and speak. He also studied the connection between thought and language.



Lev Vygotsky zone of proximal development concept



Piaget versus Vygotsky Comparison Chart

Piaget theory	Vygotsky theory
Cognitive development is a product of social transmission	Cognitive development is a product of social interaction
Claims that the development of thinking and language can be traced back to actions, perceptions and imitations by little children	Claims that there is a strong connection between learning language and the development of thinking
Does not include mentor in observations on cognitive development	Highlights the role of a mentor in cognitive development
Shows preference for learning potential of an individual	Is well-applied to teaching strategies

Bruner – Interactionalist Theory



Jerome Seymour Bruner (October 1, 1915 – June 5, 2016) was an American psychologist who made significant contributions to human cognitive psychology and cognitive learning theory in educational psychology.

Bruner believes learning should be spurred by interest in the material rather than tests or punishment, since one learns best when one finds the acquired knowledge appealing...

Bruner – Interactionalist Theory

In 1972, Bruner was appointed Watts Professor of Experimental Psychology at the University of Oxford, where he remained until 1980.

In his Oxford years, Bruner focused on early language development. Rejecting the nativist account of language acquisition proposed by Noam Chomsky, Bruner offered an alternative in the form of an interactionist or social interactionist theory of language development. In this approach, the social and interpersonal nature of language was emphasized, appealing to the work of philosophers such as Ludwig Wittgenstein, John L. Austin and John Searle for theoretical grounding.

Bruner – Interactionalist Theory

Following Lev Vygotsky the Russian theoretician of socio-cultural development, Bruner proposed that social interaction plays a fundamental role in the development of cognition in general and of language in particular. He emphasized that children learn language in order to communicate, and, at the same time, they also learn the linguistic code. Meaningful language is acquired in the context of meaningful parent-infant interaction, learning "scaffolded" or supported by the child's language acquisition support system (LASS).

Bruner – Interactionalist Theory

He did, however, believe there were individual differences and that no standard sequence could be found for all learners. He took on board people's differences and how their personality affects their use of language and that in learning some children can need more encouragement than others even if children all learn from building on knowledge and exploring ideas.

Language Learning at an Early Age

- From birth, children are surrounded by others who talk to them or with them. This communication plays a part in how the baby learns to speak his or her native language. Some argue that “nature” is entirely responsible for **how a baby learns a language**, while others argue that “nurture” is responsible for how a baby picks up his or her mother tongue.
- The idea behind **interactionist theory** is that the way a baby learns a language is both biological and social.

Language Learning at an Early Age

- Bruner argued that aspects of cognitive performance are facilitated by language.
- He stressed the importance of the social setting in the acquisition of language.
- His views are similar to those of Piaget, yet he places more emphasis on the social influences on development.

Language Learning at an Early Age

The earliest social setting is the 'mother-child dyad', where children work out the meanings of utterances due to being repeatedly exposed.

Bruner identified several important social devices including **joint attention, mutual gaze, and turn-taking.**

Language Learning at an Early Age

- Everyone loves to **coo** at babies, and this “**baby talk**” is exposing the child to language, whether we realize it or not. Interactionists believe that children are born with brains that predispose them to the ability to pick up languages as well as with a desire to communicate. Some Interactionists even argue that babies and children cue their parents and other adults into giving them the linguistic exposure they need to learn a language.
- The Interactionist Theory posits that children can only learn language from someone who wants to communicate with them.

Bruner – Interactionalist Theory

- Emphasises the importance of the linguistic environment on a child's development
- Reaction to Chomsky's LAD
- Came up with the idea of the LASS
- Highlights the importance of child's interaction with adults
- CDS encourages the child into linguistic interaction, thus encouraging language acquisition
- Scaffolding – adults help to facilitate both children's spoken language and literacy by providing 'blocks' of language

Bruner – Interactionalist Theory

- When faced with learning English as a second language, the student is essentially an infant. They cannot communicate with the teacher except through non-verbal communication.
- Therefore, it is up to the teacher to act as the adult in the infant-adult relationship. He or she is responsible for leading all interaction at first, and as the student becomes more familiar with the English language and able to communicate, the control of the interaction can be relinquished a bit and the students can **take more** control of their own language learning. Also, if students are encouraged to experiment with the language and learn that it is okay to make mistakes, they will be able to **discover for themselves** how to combine words and phrases to form full sentences and dialogues.

INPUT (SOCIAL INTERACTION) THEORY

Researcher: Jerome Bruner.

Agreed with Chomsky on the existence of a LAD.

Believe input is vital in language acquisition.

Most largely believed theory.

LASS: Language Acquisition Support System. As well as a LAD you need a LASS, which works as a scaffolding system for language.

CDS: Child Directed Speech. Vital for the acquisition of language. Parents use CDS which includes exaggerated mouth movements, more emphasized intonation and clear turn taking to encourage language from children.

FOR: Feral Children such as Genie cannot learn language without social interaction.

AGAINST: In some African tribal cultures there is no such thing as CDS but children still acquire language!

INPUT (SOCIAL INTERACTION) THEORY

- Bruner's theory.
- Language *is* symbolic, operational and logical thought!
- Language training *can* speed up cognitive development
- There are 3 modes: **Enactive, Iconic and Symbolic.**
- Enactive – baby represents world through actions
- Iconic- knowledge represented through visual or auditory images. An object can be recognised and used to become independent and in turn a permanent thing and is remembered (this is object permanence.)
- Symbolic- language starts to influence thought. It is not as dominated by appearance of things as they begin to think beyond images and use symbols such as words or numbers. Information can now be categorised and summarised and can be more readily manipulated.

INPUT (SOCIAL INTERACTION) THEORY

Bruner proposes use of scaffolding

This support structure allows child to climb to higher levels of understanding by;

- Reducing degrees of freedom = simplifying task.
- Direction maintenance = motivation & encouragement of child.
- Marking critical features = highlight relevant parts /errors.
- Demonstration = provide model for imitation.

Bruner vs Piaget

Similarities

- ❑ Children are born ready to learn language;
- ❑ Children are naturally curious about language;
- ❑ Children's cognitive structures develop over time;
- ❑ Children are themselves active participants in the process of learning language;
- ❑ Cognitive development includes the acquisition of symbols.

Differences

- Bruner sees development as a continuous process while Piaget suggests that there are set stages of development;
- Bruner claims that language development is a cause of cognitive development; Piaget sees it as a consequence of it;
- Piaget believes that you have to wait for the child to be ready, while Bruner believes that the cognitive development process can be sped up;
- Bruner places much more importance on the involvement of **MKOs (more knowledgeable others)**;
- Bruner disagrees with Piaget's theory that symbolic thought replaces earlier modes of representation.

Critical Phase Hypothesis (Lennenberg)

- CPH: Proposed by Lennenberg ◦ This hypothesis states that there is only a small window of time for a first language to be natively acquired. ◦ If a child is denied language input, she will not acquire language ☐
- Genie: a girl discovered at age 13 who had not acquired her first language
If humans do have an LAD, it must be located somewhere physically... (Chomsky denies that it can be physically found in the body)

Critical Phase Hypothesis (Lennenberg)

- Believed that if children had not been exposed to language before puberty, then they would not acquire language
- Argued that between 3 and 24 the brain's capacity to acquire language is at its maximum
- After the onset of puberty, the potential for language learning decreases as the plasticity of the brain is reduced