# Arguments for and against the Idea of Universal Grammar

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## Introduction

For many, linguists and laymen alike, language is viewed as something that is actively *learned* through sensory stimulus and training. In everyday conversations, parents talk about teaching their children how to speak by eagerly chatting with them until they one day start speaking on their own. It is perceived as a matter of input and output – If your child is exposed to a high enough frequency of linguistic content, they will one day imitate it, becoming a language user in the process. However, the idea of Universal Grammar (UG) challenges this general notion by pointing at the inconsistencies in a behaviorist, stimulus-oriented model for language learning. Proponents of Universal Grammar argue that language is *acquired* rather than learned, meaning that the child itself acquires the language on the basis of linguistic structures that are a biologically innate part of the human mind. Furthermore, these structures are argued to be *universal*, applying to all languages at all times, challenging the notion that language is a cultural construct: "[W]e are interested not only in particular languages, but also in the general nature of Language" (Chomsky 1957, 14).

When Chomsky first presented his theories in the 1950s, they were controversial, but since then they have sparked a major debate within the linguistic community. There are countless proponents on both sides of the issue, some presenting UG as "the best theory", others completely disagreeing with the seemingly abstract principles that it represents, instead subscribing to other models. In light of this continuous debate, this paper wishes to engage with the topic of Universal Grammar with regards to language acquisition. In the first part of the paper, I will present the motivation behind the theory of UG. Following this, I will present two main arguments in favor of UG, and finally, I will engage with two recent arguments against UG in an effort to explore questions regarding the validity of the argument of UG as "the best theory" in the field of child language acquisition.

# The issues of the behaviorist model

According to behaviorist psychologist B.F. Skinner (1957, 5), language is "a question about human behavior and hence a question to be answered with the concepts and techniques of psychology as an experimental science of behavior". In his view, anyone assuming that language has an independent existence apart from the speaker's behavior is wrong and scientifically misguided, as all we can observe is the speaker engaging with previous stimuli. Language learning is merely a process of trial and error, of stimuli and response, guided by the concept of reinforcement. A speaker learning a language reacts by either acquiring the linguistic form if it is met with a positive reinforcement or rejecting the form if met with negative reinforcement. Positive reinforcements grant strength to verbal operants, which is the factor that ensures its existence within a child's verbal repertoire. The most important source of both stimuli and reinforcement is the parents, who "sets up a repertoire of responses in the child by reinforcing many instances of a response" (Skinner 1957, 29). According to a given reinforcement, positive or negative, the learning speaker "manipulates his behavior", reviews it, then either acquires, rejects or modifies it. As such, language learning is simply a matter of selective reinforcement of "relatively unpatterned vocalizations" that "gradually assume forms which produce appropriate consequences in a given verbal community" (Skinner 1957, 31).

The stimuli-response-model is seemingly a good explanation for language learning, as it succeeds in explaining what most people experience when teaching a child to speak. Parents reading the above description of Skinner's theory may very well agree that it fits nicely within their own experiences. However, according to critics, the behaviorist model has a number of important flaws, which facilitates the need for an alternative model. Such a model is presented in Chomsky's innateness hypothesis.

Pinker (1994, 22) describes Chomsky's main argument against Skinner's model as follows: "[V]irtually every sentence that a person utters or understands is a brand-new combination of words, appearing for the first time in the history of the universe. Therefore a language cannot be a repertoire of responses; the brain must contain a recipe or program that can build an unlimited set of sentences out of a finite list of words". For Chomsky, the behaviorist model of language as a set of learned responses is unsatisfying, as it does not reflect how language actually works. In his view, the sheer speed at which children acquire complex grammar without trained instructions and the way that they are able to understand unique and never-before-heard sentences, including complex syntactic constructions, point to there being something else guiding the learning process, something innate to the child's brain – Some sort of Universal Grammar.

Steven Pinker (1994, 18) agrees with Chomsky that language cannot just be a product of cultural learning: "Language is not a cultural artifact (…) Instead, it is a distinct piece of the biological makeup of our brains. Language is a complex, specialized skill, which develops in the child spontaneously, without conscious effort or formal instruction, is deployed with awareness of its underlying logic, is qualitatively the same in every individual". Pinker uses the word "instinct" to describe it, which denotes that it is a natural and unconscious faculty which "is no more a cultural invention than is upright posture". Like Chomsky, Pinker disagrees with the notion that children acquire their mother tongue by imitating their parents. When a child says: "Don't giggle me", or "We holded the baby rabbits", it cannot be imitation, as the child has surely never heard those expressions before from the parent (Pinker 1994, 21). The first one, "Don't giggle me", is a wrong use of the word "giggle" that an adult would (probably) never use; the second example inflects the verb "hold" as a regular verb, which points to some sort of underlying systematicity of grammar. According to Pinker, such an underlying grammar "offers a clear refutation of the empiricist doctrine that there is nothing in the mind that was not first in the senses" (Pinker 1994, 124).

## Arguments for Universal Grammar

Having presented a general outline of the issues regarding the acquisition of language that Universal Grammar seeks to resolve, I will now go into depth with some of the more specific arguments for UG. The arguments are connected, with the first detailing the problem of the productive nature of language and the second looking specifically at child language acquisition and the argument from the poverty of stimulus, both seeking to argue the stance that UG is the best theory for explaining the processes behind language acquisition.

### A system of discreet infinity

The first argument that I will present for the case of Universal Grammar is found in the incredible vastness of language, which prompted Chomsky to call the human language faculty "a system of discreet infinity" (Chomsky 2005, 11). To illustrate how vast language is, Pinker (1994, 85) uses the example of a hypothetical 20 words sentence. If a speaker is interrupted during any point in the 20 word-sentence, there are on average about ten different words that can be inserted to continue the sentence in a coherent, grammatical way. This results in at least $10^{20}$, or a hundred million trillion, different possible sentences. Speaking a sentence every five seconds, it would take a person about a hundred trillion years to memorize them all. If one was to (rightfully) note that sentences can be longer

than 20 words, this number drastically increases. Evidently, an idea based on pure imitation and memorization of responses seems to be flawed.

Continuing this line of thought, Chomsky argues that a behaviorist model of input/output does not make sense for language acquisition because of the clear complexity of the internal grammar of the human mind which can project "the finite and somewhat accidental corpus of observed utterances to a set (presumably infinite) of grammatical utterances" (Chomsky 1957, 15). A language user is able to both produce and understand an indefinite number of sentences, regardless of whether the person has heard the specific grammatical structures before. Chomsky points to the weakness of an argument that assumes a statistical model for grammatical language that works on the basis of the frequency and variety of input steering the language learning process. He lists two examples:

(1) Colorless green ideas sleep furiously

(2) Furiously sleep ideas green colorless

Both are sentences that have probably never been uttered in an English discourse before, as they are semantically meaningless and absurd. However, sentence (1) is grammatical in English, while sentence (2) is not. For Chomsky, this speaks against the idea that frequency or statistical approximation is any indicator of whether something is grammatical or not (Chomsky 1957, 15-16). This is in direct opposition to Skinner's claim that "a response must appear at least once before it is strengthened by reinforcement" (Skinner 1957, 29), as it illustrates that even outlandish and absurd sentences can be judged as grammatically sound. It appears that grammaticality and semantic meaning are not connected, which means that speakers of a language can determine whether something is grammatical or not purely by structure. Chomsky further presents the following examples:

(3) Have you a book on modern music?

(4) The book seems interesting

(5) Read you a book on modern music

(6) The child seems sleeping

Out of these, (3) and (4) are grammatical, (5) and (6) are not. From examples such as this, Chomsky concludes that "one's ability to produce and recognize grammatical utterances is not based on notions of statistical approximation and the like" (Chomsky 1957, 15). He concludes that "grammar is autonomous and independent of meaning", which points to a structural system underlying language.

Pinker (1994, 87) continues Chomsky's argument, arguing that a good argument for an innate grammar is that it is "autonomous from cognition". It is possible to make sentences that are ungrammatical, but still easily interpreted:

(7) It's a flying finches, they are

(8) Drum vapor worker cigarette flick boom

(9) This sentence no verb

(10) This sentence has contains two verbs

(11) This is not a complete. This either.

The fact that these are read as ungrammatical despite being fairly easily understood points to there being a fixed code for interpreting linguistic structure that is entirely separate from semantic interpretation.

The major point to draw from this argument is that despite language being incredibly vast, speakers still manage to produce correct grammatical forms. On this basis, Chomsky (2005, 5) argues that one of the core problems of studies of language acquisition is finding the mechanisms that produce only "optimal types" of outcomes – a system that does not make mistake. The grammaticality of semantically meaningless sentences illustrates that such a system appears to exist in the mind as a separate faculty from semantic interpretations.


**The poverty of stimulus and the genius child**

Andrew Carnie (2007, 14) draws a distinction between the concepts of "learning" and "acquisition". Learning is a way of getting conscious knowledge, such as rules of algebra and learning how a car engine works. Acquisition, on the other hand, concerns subconscious knowledge, such as the ability to speak or "the ability to visually identify discreet objects". For Pinker (2004, 949), an important question to keep in mind is how acquisition works in principle, that is "how a learner can correctly generalize from a finite sample of sentences in context to the infinite set of sentences that define the language from which the sample was drawn". These generalizations are arguments against behaviorist models, as these models cannot account for how learners are able to correctly generalize from the relatively small sample size of language that they encounter as stimuli. This argument is known as the argument from the poverty of stimulus, which posits "that the samples of language available to a child are insufficient to explain the adult's knowledge of language" (Crystal 2008, 378). This argument invokes the innateness hypothesis as a possible solution to the issue.

Pinker argues against the notion the children learn languages from their parents, instead arguing that "[c]hildren deserve most of the credit for the language they acquire" (Pinker 1994, 40). He uses an example from Chomsky to illustrate this: To turn the declarative sentence "a unicorn is in the garden" into a question, the finite auxiliary *is* undergoes subject-auxiliary inversion. The sentence then becomes: "Is a unicorn in the garden?". But what happens when a sentence has two *is*'s, such as "a unicorn that is eating a flower is in the garden"? Which *is* undergoes movement?

(12) *Is a unicorn that eating a flower is in the garden?

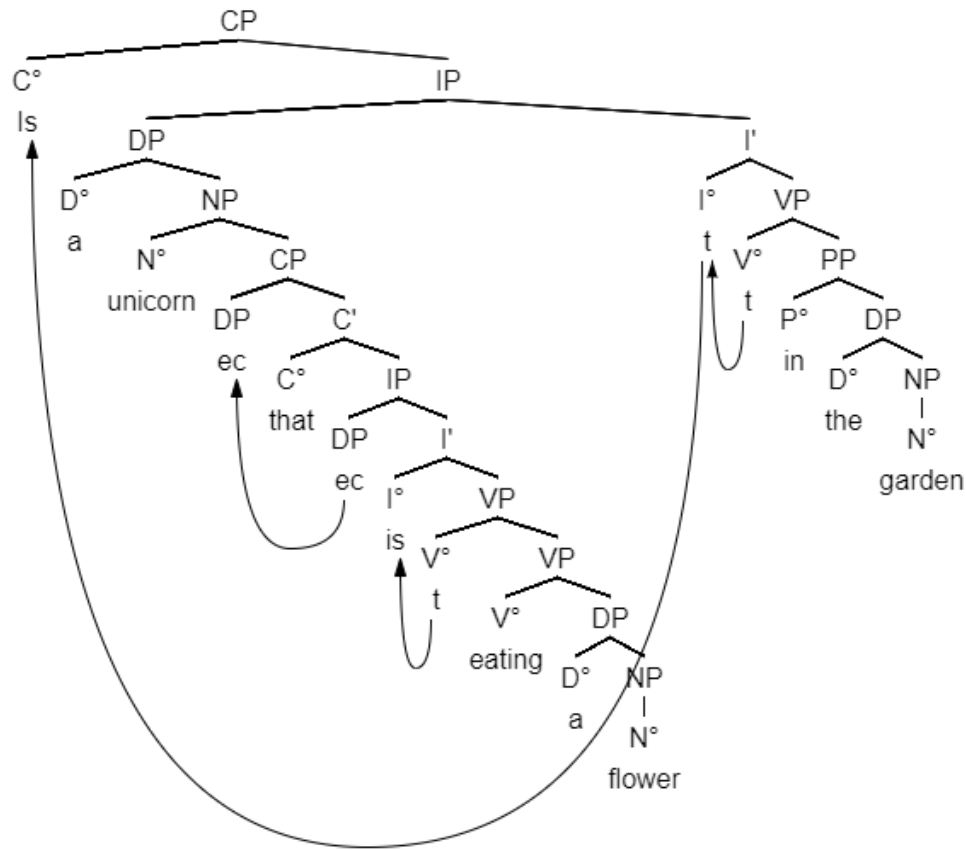(13) Is a unicorn that is eating a flower in the garden?

Example (12) is what happens when you move the first *is* in the string of words. This is entirely ungrammatical. Example (13) is correct and grammatical. For Chomsky, this is an argument for the mental grouping of words into phrases. The word "is" that is moved in the erroneous first example is a part of a phrase that functions as the subject:

> [DP a unicorn that is eating a flower] is in the garden ➔
>
> Is [DP a unicorn that is eating a flower] in the garden?

Realized as a tree, the correct sentence, sentence (13), will look as follows:

(14)

[Syntax tree diagram for the sentence "Is a unicorn that ec is eating a flower in the garden" with nodes: CP, C° (Is), IP, DP (D° a, NP with N° unicorn, CP with DP ec, C' with C° that, IP with DP ec, I' with I° is, VP with V° t, VP with V° eating, DP D° a NP N° flower), I' with I° t, VP with V° t, PP with P° in, DP D° the NP N° garden]

As shown in the tree, the first *is* is a part of the determiner phrase (DP) that functions as the subject of the sentence. The second *is* is thus the verb undergoing subject-auxiliary inversion to form the question (Vikner 2018b, 2). If a child is able to turn a sentence with two auxiliaries into a properly worded question on their first encounter of one, this points to innate language structures within the child's brain. The idea was confirmed in an experiment conducted by Crain and Nakayama which tested children's ability to form questions from sentences with multiple instances of *is*. An example of one of their questions is: "Ask Jabba if the boy who is unhappy is watching Mickey Mouse" (Pinker 1994, 42). In the experiment, every child tested succeeded in creating the correct structure for the question, with none resorting to the wrong, but deceptively logical, structure of the above sentence (12).

Pinker (1994, 39) notes, that because mothers generally speak in "Motherese" (a simplified English) to their children, it is fair to assume that a child has never heard a relatively complex construction as the above example before. This appeals to the argument from the poverty of input, which posits that children, even if they have never encountered a construction like the double auxiliary construction above, can form correct sentences using the structure, which points to there not being

connection between the mother's speaking to the child and the way the child eventually speaks. According to Pinker, "[t]he universal plan underlying languages, with auxiliaries and inversion rules, nouns and verbs, subjects and objects, phrases and clauses, cases and agreement, and so on, seems to suggest a commonality in the brains of speakers" (Pinker 1994, 43).

Supplementing the above argument is an argument pointing at the very low degree of grammatical mistakes in children's language with regards to certain parameters. Even if child speech may seem flawed, certain mistakes are rarely (or never) made. Pinker (1994, 272) cites an experiment conducted by psychologist Karen Stromswold which tested how well children use auxiliary verbs. The system of auxiliaries in English is very complex, with about 24 billion billion possible combinations of auxiliaries, but only about a hundred grammatical ones:

(15) He has been eating

(16) He may have been eating

(17) *He have might eat

(18) *He did be eating

(19) *He may did been eat

Stromswold was interested in counting the number of mistakes the children in her experiment made, specifically with regards to erroneous generalizations based on the sentence patterns that the children heard from their parents, such as:

(20) a. He did eat → He didn't eat

    b. He did a few things → *He didn't a few things

(21) a. I like going → He likes going

    b. I can go → *He cans go

(22) a. He is happy → He is not happy

    b. He ate something → *He ate not something

20b, 21b and 22b are all seemingly logical generalizations based on the proper grammar of 20a, 21a and 22a, but they are ungrammatical: 20b treats main verb "do" as an auxiliary based on 20a; 21b inflects a modal verb with the 3rd person singular form of standard auxiliary- and main verbs, despite it being a modal and thus already being finite; and 22b generalizes the position of the copula verb "is" to apply to the main verb "ate", violating English do-insertion with regards to negation (Vikner 2018a, 11). Despite these forms being deceptively similar and thus open to misguided generalizations,

Stromswold found no errors across 66000 sentences. Pinker concludes: "The three-year-old (…) is a grammatical genius – master of most constructions, obeying rules far more often than flouting them, respecting language universals, erring in sensible, adultlike ways, and avoiding many kinds of errors altogether" (Pinker 1994, 276). This very early mastery of certain grammatical structures is an argument in favor of UG that at the same time challenges the idea of a stimulus-oriented stance on language learning.

### Summing up

In this section, I have looked at two main arguments for the existence of Universal Grammar. The first argument claims that the infinitely productive and creative nature of the language that the child acquires cannot be explained merely by means of sensory input, as it is impossible for a child to gain sufficient linguistic data to be able to speak as they do. The second argument continued from the first, focusing more directly on the innate grammatical structures which are presented in the theory of UG, concluding that even though children do not receive enough linguistic input to be able to sufficiently "learn" grammatical structures such as the use of auxiliaries in English, they still make virtually no mistakes in the area.

# Arguments against UG

Having looked at arguments in favor of Universal Grammar, I will now compare these with arguments challenging it. I have chosen two scholarly refutations, each representing separate, unrelated criticisms of Universal Grammar. Both articles are recent, from 2015 and 2017, respectively, thus illustrating that the debate is still ongoing. I will present the arguments of each article and then compare with the arguments in favor of UG that I have presented so far in this paper. My aim in doing so is to test the soundness of Chomsky's claim of UG being "the best theory" for language acquisition.

### The theory of the empty mind

Halpern (2015, 1175) seeks to present an alternative to the theory of UG, which he argues has been invented "to fill a gap". He argues that if such a capability was present at birth, why does it then disappear later in life: "[W]hy would nature provide us a survival tool to use during our infant years, only to withdraw it after that?". His alternative is an idea of the child's mind or brain being plastic to the point where it "does not acquire, but is formed by the languages it hears". He argues that the speed

at which children learn languages is not because of a pre-structured brain, as UG claims, but instead the opposite – That it has no virtually no structure at birth and because of this does not learn language, but is shaped by it: "It is language that turns the brain into a mind, and it would be more accurate to say not that the child acquires language, but that the language acquires the child" (Halpern 2015, 1175).

His suggestion is that the child accepts each new word it encounters as a unique, syntactically unrelated item that is stored in its "huge, originally empty and unstructured memory". The child does not attempt to form a grammar, but instead merely memorizes anomalies and irregularities as well as each inflected form of a given word as "a separate little gem accepted on its own terms". He argues that the brain then makes connections on a basis of similarity in the circumstances in which the word is used, "with connections reinforced by repetition, and fading if not repeated", and later, the child begins to use "simple analogies, such as thinking that words that sound alike, or have similar meanings, must be pluralized alike" (Halpern 2015, 1175-76).

Halpern's idea of the newborn's "virtually empty and unformed mind" is further explained by a computer analogy (Halpern 2015, 1176). He compares the young brain to a computer's hard drive, which at purchase is empty, except for the hidden "programs without which the computer would be a lifeless lump of metal." Halpern's idea of empty is to be understood as being empty and open to input, but still controlled by necessary programs, a "system software". This connects to his idea that language structures the brain: Like a computer, the brain has an "indexing tool that scans every string of textual input", not only preserving the data but also building a structure for it. Children are not "hard-working little theoretical linguists, but rather wonderful little prehensile graspers and assimilators of thousands of distinct experiences, collectors of individual instances who forget little, and whose 'theorizing' about the relationships among those instances is largely accomplished by the way their brain is storing those inputs" (Halpern 2015, 1177-78).

Halpern presents multiple pieces of evidence for his claims. One is a case of a group of researchers attempting to teach pieces of English language to a bonobo, Matata, with very limited results. Interestingly, however, Matata's child, Kanzi, revealed to have learned far more than his mother, which to Halpern is an argument that his brain was more malleable because of his young age. Halpern claims that: "It has not been suggested by anyone, so far as I know, that bonobos have innate UG just waiting to be awakened by exposure to human language" (Halpern 2015, 1178). He also uses the argument of feral children, claiming that feral children "are not merely inarticulate, but seem when examined in adolescence or later to be so mentally unformed as to be only imperfectly human". However, he immediately discredits this evidence by acknowledging that a feral child probably has had

a difficult life overall with little human contact, so "his state cannot be attributed with certainty to language deprivation".

Halpern's last argument focuses on creoles (Halpern 2015, 1179). He claims that children growing up with parents speaking two different languages would have virtually no chance of "constructing a grammar that covers everything he is hearing and nothing else", which he uses as an argument against UG. According to Halpern, the idea of UG functioning with a single language is already very unlikely, so adding another language into the equation would effectively make it impossible. However, such children do acquire some sort of language, "a creole, perhaps", as Halpern points out.

Relating his arguments to the arguments for UG, it is not too difficult to find counterpoints. Firstly, the overall idea of his model seems to draw parallels to the behaviorist model and can thus be refuted by pointing to the argument for the poverty of stimulus. His idea of the brain as a pre-programmed computer hard drive is an interesting image, but it falls into the problem of being rather vague. By the way Halpern explains it, this idea of pre-programming could very well be changed into an argument in favor of UG, which can be defined as exactly that, a sort of innate, pre-programmed framework for language acquisition. The example of Kanzi the bonobo is no more convincing. Many animals can be taught to understand simple linguistic data. That does not prove that they possess UG, as that would require them to develop a full set of linguistic skills. In the case that this should in fact turn out to be true, it is still not an argument against UG. UG concerns the universal language of the human species. If it was discovered in bonobos, it would simple mean that bonobos also possess some kind of UG. If this hypothetical UG was to be studied, it may in fact turn out to be easier to study because of a simpler nature, which could turn the attempt at a refutation into an argument in favor of UG.

Halpern's last argument, the creole-argument, is interesting. He argues that the emerging creole from the child in his example is an argument that UG must have failed, but this is a misrepresentation. Pinker (1994, 33) actually uses creoles as an example of a way to study how UG works because it is a type of functioning language being created in the minds of children of pidgin-speakers. According to him, "[a] pidgin can be transmuted into a full complex language in one fell swoop: all it takes is for a group of children to be exposed to the pidgin at the age when they acquire their mother tongue". The case of creole-formation may present UG-theorists with an example of a linguistic development that indicates some sort of innate linguistic structure, as it is an example of a language forming itself and creating its own structural logic based on seemingly insufficient stimuli.

Overall, Halpern argues that the mind is shaped by language, but by suggesting that there is still some sort of innate programming needed to steer the process, his argument can inadvertently be seen as a step towards the polar opposite stance: UG's view that "complexity in the mind is not caused by learning; learning is caused by complexity in the mind" (Pinker 1994, 125).

**A methodological refutation**

While Halpern attempts to provide an alternative to UG, Lin (2017) attempts to present a refutation of Universal Grammar by deconstructing Chomsky's methodological approach as a whole. He does so by looking at a number of UG principles, of which Subjacency is his main focus.

Subjacency is the principle that linguistic movement "cannot cross more than one bounding node", with bounding nodes being IP and NP (Lin 2017, 3) (It should be noted that Poole (2011, 165) identifies DP as a bounding node instead of NP, which is more in line with the current research). Examples from Lin:
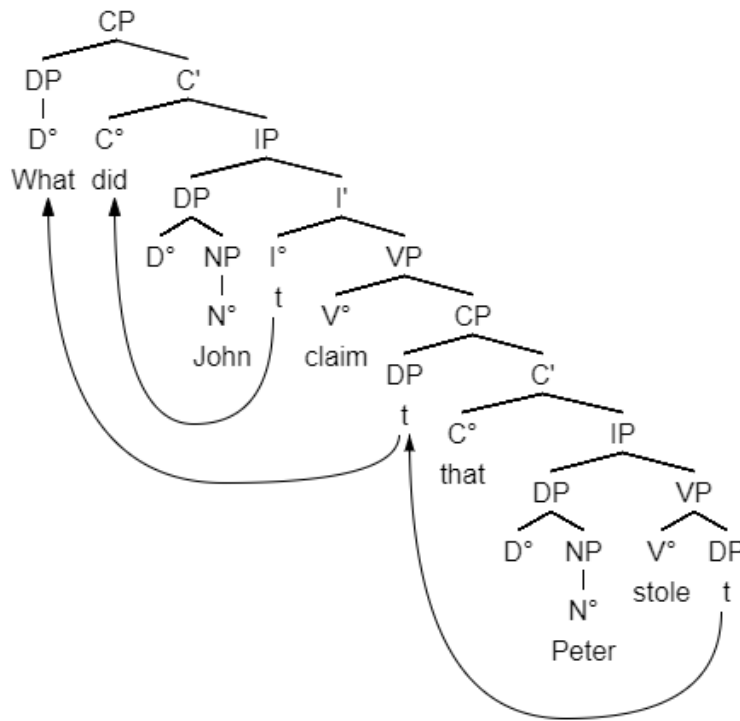
23) What$_1$ did John claim that Peter stole t$_1$

24) *What$_1$ did John make the claim that Peter stole t$_1$

Drawn as a tree structure, sentence (23) would look as follows:

25)

```
                              CP
                    ┌─────────┴────────┐
                   DP                  C'
                    │            ┌──────┴──────┐
                   D°   C°             IP
                 What  did     ┌───────┴──────┐
                              DP              I'
                         ┌────┴───┐      ┌────┴─────┐
                        D°   NP   I°          VP
                              │    t     ┌────┴────┐
                             N°          V°        CP
                            John       claim  ┌────┴────┐
                                             DP         C'
                                              t    ┌────┴──────┐
                                                  C°           IP
                                                 that     ┌────┴────┐
                                                         DP         VP
                                                    ┌────┴──┐   ┌───┴──┐
                                                   D°   NP  V°     DP
                                                         │  stole   t
                                                        N°
                                                       Peter
```

"What" is moved from the object position of "stole" to form the question by fronting the wh-element. According to rules of wh-movement and Subjacency, the DP "what" passes through every local CP-spec along the way. That way, it does not cross more than one bounding node at a time. This is not the case for (24), however:

26)
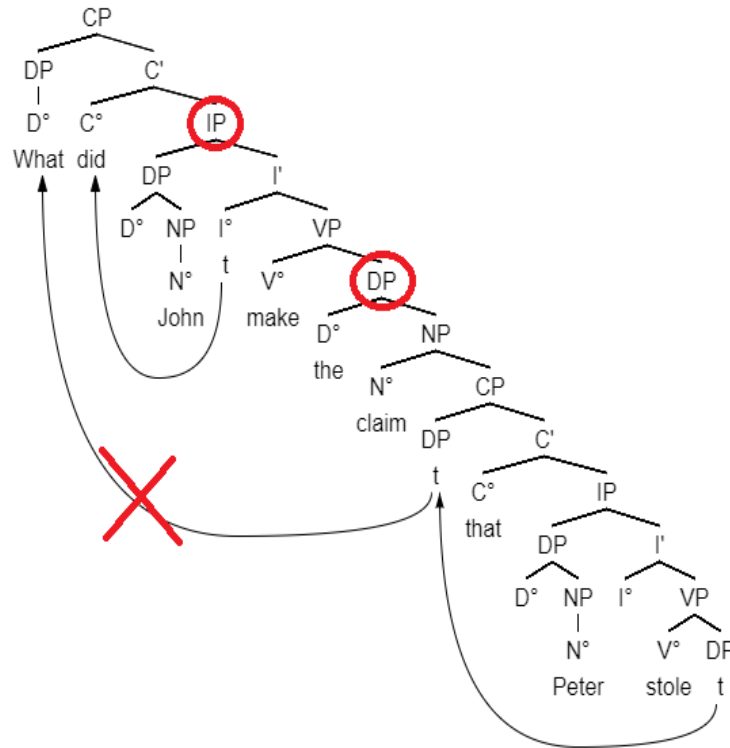


In this tree, the same movement is attempted: "What" moves through each local CP-spec, but the structure violates the principles of Subjacency by passing two bounding nodes. The principle of Subjacency thus gives a structural explanation for why the movement in (24) is ungrammatical.

In the article, Lin argues that Chomsky's method is fundamentally flawed. He points out that the Subjacency-principle is based on English data, and other languages might violate it (Lin 2017, 4). If such a violation is ever found, it would discredit the idea of UG being universal, in turn discrediting the theory as a whole. He points out that one would have to study all of the 6000-8000 languages in the world to find out whether principles are in fact universal and innate, but even that would not prove the theory; One would have to study all languages in the history of the world (estimated to be about half a million) and also all future and potential languages, which may amount to an infinite number, to really be sure. He sums his position up as follows: "No matter how many sentences in how many languages UG theorists have examined, the version of Subjacency posited on the basis of those data cannot be regarded as the law governing movement of words in human languages" (Lin 2017, 4). His conclusion on the basis of this is that since the method used to establish the existence of the Subjacency-principle is general in Chomsky's work, all of the principles of UG are flawed. To Lin, the idea of finding a Universal Grammar that applies to all languages is an impossible task.

Later in his article, Lin uses his arguments against Subjacency as arguments against different Chomskyan principles. One of these is the argument from the poverty of stimulus which I described earlier. However, Lin does not go into depth with this argument, simply stating that his main argument about Subjacency proves that UG does not exist, meaning that the poverty of stimulus-argument argues for something that does not exist, making it meaningless, even though he does concur that "how the child acquires language is puzzling and needs explaining" and that "there must be innate constraints on the child's acquisition of language" – just not the ones argued in UG (Lin 2017, 11). He also argues that Chomsky's "best theory"-argument, the argument that UG is the best theory we have and thus may very well turn out to be true, is flawed based again on his arguments against the method regarding Subjacency.

Lin's criticizes Chomsky's method for being the following: "On the basis of certain interesting data, find some general principles that explain them; revise the principles if necessary" (Lin 2017, 4). But this description may inadvertently show the flaws in Lin's argument. Kim (2018, 122) argues that Lin's refutation of UG is in fact a refutation of inductive science altogether. He focuses on one of Lin's concluding remarks: "UG theorists try to discover UG principles, parameters and so on, by examining certain grammatical and ungrammatical sentences in some languages. It is impossible to find the intended innate language universals using this method" (Lin 2017, 20). Kim acknowledges that the first sentence is in fact the way many UG theorists work. However, he is critical of the last sentence, arguing that very few would hold that the ideas of UG are "impossible". Some may find it unlikely, but "impossible" is too strong.

Kim's main refutation of Lin's refutation is that it is too extreme. According to Kim, what Lin actually criticizes is inductive empirical science as a whole: "A different concern one might have is that the way UG theorists investigate UG results is an epistemic quandary: The linguistic community couldn't *know* that Subjacency$_U$ = Subjacency$_k$ even if this were true. But this is the position that scientists in any empirical field are in: Theories intended to explain more than a finite range of empirical phenomena face the problem of induction. That is, scientists cannot know that their preferred theory (…) applies in all relevant circumstances in which it should apply" (Kim 2018, 123). Lin's critical description of Chomsky's method comes very close to being a description of inductive empirical science as a whole: "The development of Subjacency shows that Chomsky's research method is this: starting from some grammatical data, find some rules which can explain the data and then try to obtain some more abstract principles. Of course, the rules and principles are subjected to revision if recalcitrant data are found" (Lin 2017, 3). Kim argues that if we accept Lin's arguments to be true,

then it deconstructs the entire field of inductive sciences. If we do not accept it to apply to all inductive sciences, then it does not apply to UG either. Chomsky's "best theory"-argument, which Lin allegedly disproves, may in fact just be the highest obtainable goal in any inductive science, where the goal is to present the most satisfying theory from the presented evidence, and then revise when necessary.

## Conclusion: The best theory?

In this paper, I have presented arguments for and against Chomsky's idea of Universal Grammar as the best theory for explaining child language acquisition. I started my paper by presenting the motivation behind the nativist stance. After this, I presented a number of arguments in favor of Universal Grammar centering around the vastness of language and the poverty of input. Having done this, I examined two critical articles and discussed them in light of the arguments in favor of UG, with the conclusion that both may in fact inadvertently provide reinforcement rather than refutation for UG.

According to Chomsky (1995, 7), the main objective for researchers is to seek "best theories" in the search for better understanding the natural world. The naturalistic approach is to "seek the best theoretical account of the phenomena of experience and experiment, wherever the quest leads" (Chomsky 1995, 39). As I have shown in my discussion of the arguments against UG, they both fail to present satisfying alternatives to UG. While they both do succeed in illustrating that there are still questions left to answer, they do not reach a point of certainty or clarity that convincingly disproves Chomsky's "best theory"-argument. On the contrary, the vagueness of the arguments against UG may in fact lend more strength to the idea of UG as the best theory, since UG is able to account for many of the things that critics cannot.

At the end of the day, the debate is still ongoing, with a large number of proponents on each side of the spectrum. Whether the idea of Universal Grammar is the best explanation for how language acquisition functions is not for this paper to decide, but its theoretical framework and arguments highlight that there are still unanswered questions in the field of linguistics. The strength of the arguments for Universal Grammar are hard to ignore, which, even if one disagrees with the theory, proves that there is still much to explore in the way we as human beings acquire and use the languages we speak.

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