

# The Debate on Faculty of Language and its Subsequent

# Influence

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**Abstract:** In 2002 and 2005, there were four papers in Science and Cognition authored by Chomsky et al and Pinker et al. which fiercely and fruitfully debated about the nature of the faculty of language. This paper first briefly outlines the theoretical common ground of their debate and then expounds on their divergences concerning the research methods, the composition of the faculty of language, the evolution of language and the primary function of language. It is revealed that that although there are discrepancies between both camps, fruitful results can be obtained through their mutual criticism which is conducive to clarifying the conceptions about the faculty of language. It is also argued that the academic criticism is essential for further research on the faculty of language. In consequence, the research on the evolution of language has become a major topicin contemporary linguistics and the multi-disciplinary and even trans-disciplinary approaches have become more and more prominent.

Keywords: Faculty of Language; Evolution of Language; Recursion; Merge; Minimalism

# **1. INTRODUCTION**

Language is a unique characteristic of the human species, and all humans are genetically equipped with the ability to acquire and use the languages to which they are exposed. Human language is believed to be a relatively recent evolutionary development, with the consensus that it first emerged around 100,000 years ago and has remained largely unchanged since our ancestors left Africa (Tattersall, 2009). Numerous scholars have conducted research on the nature of language, yielding valuable insights; however, many questions remain hotly debated. Among the most prominent are: What constitutes the faculty of language? How did this faculty evolve? Linguists, anthropologists, archaeologists, psychologists, biologists, and neuroscientists have all shown great interest in exploring these questions, yet satisfactory answers remain elusive. The origin of language and its evolutionary emergence in humans have been subjects of investigation for centuries. However, the lack of direct empirical evidence has made the topic challenging for serious scientific inquiry. As a result, in 1866, the Linguistic Society of Paris officially prohibited discussions on the origin of languages. Nevertheless, this ban has not deterred inquisitive minds from contemplating the issue. With the advent of new tools and methods, the topic has regained prominence and attention in recent years.

Chomsky, the founder of Transformational-Generative Grammar, has been thinking about the nature of language for a long time. He and his collaborators (Hauser *et al.* 2002) published a paper in *Science*,

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"The faculty of language: what is it, who has it, and how did it evolve?". Hauser is an evolutionary biologist who specializes in primate behavior, animal cognition, and human behavior. Fitch isa cognitive scientist who studies the biology and evolution of cognition and communication in humans and other animals, especially speech, language, and music. In this influential paper, they proposed a fundamental distinction between the faculty of language in the broad sense (FLB) and the faculty of language in the narrow sense (FLN) in humans. This landmark paper has become a classic reference for the study of the faculty of language. It attracted widespread attention from the academia and initiated a heated debate on the faculty of language.

Seven Pinker and Ray Jackendoff are staunch opponents. Pinker is an American cognitive psychologist, linguist, and popular science writer. He is a leading researcher in evolutionary psychology and computational theory of mind. Jackendoff is an American linguist whose research revolves around the structure of the human language faculty and its role in human cognition. His study straddles the boundary between generative and cognitive linguistics. Together, Pinker and Jackendoff (2005) published a paper, "The *faculty of language, what is special about it?*", in which they vehemently attacked the "recursion-only hypothesis". Shortly after the publication, Fitch, Hauser and Chomsky (2005), responded and clarified the concept of the faculty of language, pointing out that Pinker and Jackendoff did not correctly distinguish between two different kinds of faculty of language. Jackendoff and Pinker (2005) soon published "*The nature of the language faculty and its implications for evolution of language*" in Cognition, further criticizing the shortcomings of FLN. In the literature, the two sides are often abbreviated as HCF/FHC and JP/PJ respectively.

This paper is structured as follows: Section 2 sketches the basic consensus on language between the two sides, Section 3 details four major controversies surrounding the debate, Section 4 outlines the subsequent influence of the debate and the final section provides a brief summary.

# 2. BASIC CONSENSUS ON LANGUAGE

The ongoing debate surrounding the nature of language, while deeply rooted in linguistic theory, features contributions from leading scholars across various disciplines, including biology, psychology, linguistics, and cognitive science. This interdisciplinary engagement highlights the complexity of the subject and underscores the importance of diverse perspectives in enriching our understanding of language.

Upon closer examination, the debate can be characterized primarily as an intra-theoretical controversy, where the participants grapple with fundamental questions about the faculty of language and its evolutionary origins. Despite the differences that exist between the two sides, there is notable common ground. Both camps generally subscribe to what can be termed the "internalistic view of language," which posits that language is primarily a cognitive phenomenon residing within the mind of the speaker. This perspective emphasizes the mental processes involved in language acquisition and usage, suggesting that the ability to use language is an inherent aspect of human cognition.

Additionally, both sides acknowledge the "modularity of language," which refers to the idea that language processing is a distinct cognitive module that operates independently from other cognitive functions. This concept supports the notion that language is not merely a byproduct of other cognitive abilities but rather a specialized system with its own rules and structures.

As scholars continue to engage with these ideas, they often find themselves revisiting and refining their theories in light of new evidence and arguments. The ongoing dialogue not only fosters a deeper understanding of language itself but also encourages interdisciplinary collaboration, paving the way

for innovative research that transcends traditional boundaries. In this dynamic environment, the quest to unravel the mysteries of language remains a compelling and ever-evolving endeavor.

# 2.1. The Internalistic View of Language

In his influential work, Chomsky (1986) posits that the ability to speak is an innate characteristic of the human mind and brain. He conceptualizes human language as a faculty of the mind, akin to a mental organ such as the liver or heart. This so-called "language organ" is believed to be genetically embedded in the cerebral cortex and is shared by all humans through genetic inheritance, transcending differences in race, color, and cultural background. This perspective suggests that the capacity for language is a fundamental aspect of human biology.

Building on Chomsky's ideas, Steven Pinker argues that all languages are constructed upon the same underlying framework known as universal grammar. He asserts that the mechanisms for language are hardwired into the human brain, likening language acquisition to an instinct, as innate to humans as the ability to fly is to birds. Pinker further hypothesizes that language possesses a specialized and independent neural basis, suggesting that the cognitive architecture supporting language is distinct from other cognitive functions.

According to this view, the initial state of universal grammar is uniform and invariant across all human beings. Children learn their native languages by adjusting relevant parameters based on the specific linguistic input they receive. For example, a child born in Beijing will acquire Chinese, while a child born in London will learn English, demonstrating the adaptability of the language faculty to different linguistic environments.

Chomsky's focus on I-language—where "I" stands for Internal, Individual, and Intensional—marks a significant conceptual shift from the study of externalized language (E-language) to internalized language. This paradigm shift, as noted by Chomsky in 1986, has made the study of language more objective and scientific, advancing linguistics as a legitimate branch of natural science. By emphasizing the internal cognitive processes underlying language, this approach fosters a deeper understanding of how language functions within the human mind.

# 2.2. The Modularity of Language

Since the early development of Generative Grammar, Noam Chomsky has consistently argued that the faculty of language functions as a modular system within the human brain. In his seminal works (1965, 1981, 1986), he conceptualizes language as a subsystem that operates independently from other cognitive processes, suggesting that it adheres to its own set of principles distinct from those governing other cognitive systems. This modularity implies that language is not merely an extension of general cognitive abilities but rather a specialized capacity with unique characteristics.

Chomsky further elaborates on this modular framework by decomposing the language module into three primary submodules: the syntactic, phonological, and semantic components. Syntax, in particular, is identified as the generative component that mediates between sound and meaning, playing a crucial role in how language is structured and understood. Chomsky even posits that syntax itself is modular, a concept that is prominently reflected in his Government-and-Binding theory of syntax, which emphasizes the hierarchical nature of syntactic structures and their independence from other cognitive functions.

In his later work (1995), Chomsky reinforced the notion that language mechanisms operate independently, clearly delineating them from the conceptual-intentional system that underlies meaning and the sensorimotor system responsible for speech and sound production. This separation underscores the complexity of linguistic processing and its distinct role in human cognition.

Supporting Chomsky's modularity hypothesis, Steven Pinker (1994) contends that linguistic knowledge is compartmentalized and separate from general cognitive processes. He also argues for a distinction between grammar and the lexicon, suggesting that these elements of language function independently yet interact within the broader framework of linguistic competence. Together, Chomsky and Pinker's perspectives contribute significantly to the understanding of language as a modular, specialized system, fostering ongoing research into the intricacies of human language acquisition and processing.

### 3. FOUR CONTROVERSIES AROUND THE DEBATE

#### **3.1. Research Methods**

HCF/FHC emphasize the scientific validity of the comparative approach, which is fundamental to Darwin's evolutionary theory and serves as a core method in modern evolutionary biology. This comparative method involves analyzing existing species to draw inferences about the characteristics of their distant ancestors based on empirical data. It has played a pivotal role in advancing our understanding of biological evolution, allowing researchers to identify patterns and mechanisms that underlie the development of various traits across species.

In the context of linguistics, HCF/FHC focus on identifying which components of language are unique to humans or to the human language faculty. They suggest that similar traits observed between humans and non-human species may have evolved independently as analogues rather than homologues. While evolutionary research typically emphasizes homologous traits—those that arise from a common ancestor—HCF/FHC highlight the importance of non-homologous traits, which can be illuminated through comparative studies. For instance, they draw parallels between the language acquisition processes of human infants and young birds. Both groups exhibit critical periods for language learning, constrained by physical and developmental limitations. Just as human infants require a supportive neural and developmental environment to acquire language, young birds also undergo a babbling phase that is essential for their language development.

In contrast, PJ/JP challenge HCF/FHC's assertion regarding non-homologous similarities. They argue that comparing the language acquisition processes of humans and birds is problematic due to the significant evolutionary distance between the two groups, as they do not share a common ancestor. Instead, PJ/JP contend that the process of language acquisition in humans is more appropriately compared to that of great apes, such as gorillas. They advocate for a focus on homologous similarities, which they believe provide stronger evidence for the evolutionary origins of human language. The language acquisition process in gorillas suggests that certain cognitive and communicative capabilities may be shared with humans, indicating that human language is not an entirely new trait but rather an evolution of pre-existing capacities.

While the language acquisition processes in birds may reveal common evolutionary constraints, the similarities between human and gorilla language acquisition imply a more direct lineage. This debate highlights the complexity of understanding language evolution, as researchers grapple with the intricate relationships between different species and the various factors that influence the development of language as a cognitive faculty. Ultimately, both sides contribute valuable insights into the ongoing inquiry into the origins and evolution of language, reflecting the multifaceted nature of this fascinating area of study.

## **3.2. Recursion-only Hypothesis**

The debate between the two camps actually centers around one core concept, namely recursion. Chomsky (1965) introduced the concept of recursion to the study of language, arguing that there are recursive rules in grammatical systems, which are responsible for embedding one phrase within another. In this way, the discrete infinity of a language can be realized. With the advent of the minimalist program (Chomsky 1995), Chomsky attributed discrete infinity to Unbounded Merge. Since Merge operations are employed at each step of syntactic derivation, simple sentences are also recursively generated. The iterative use of Merge dynamically generates a variety of usable sentences. Merge can be further classified as External Merge and Internal Merge (Chomsky1995, 2019). Merge (X, Y) is external Merge if X and Y are separate syntactic objects. Merge(X, Y) is internal Merge if either X contains Y or Y contains X.

HCF (2002) makes a crucial distinction between the faculty of language in the broad sense (FLB) and the faculty of language in the narrow sense (FLN). FLB encompasses a range of systems essential for language processing, including the sensory-motor system, which is responsible for the articulation of speech; the conceptual-intentional system, which pertains to the cognitive processes underlying meaning and intention; and the computational mechanism for recursion, which allows for the generation of complex syntactic structures.

In contrast, FLN is defined more narrowly and is posited to include only the capacity for recursion. HCF argues that most features of FLB are shared with vertebrates, suggesting that these aspects of language processing are not unique to humans. This distinction leads to the formulation of the "recursion-only hypothesis," which posits that recursion is the fundamental essence of human language. According to this hypothesis, the ability to embed clauses within clauses, creating hierarchically structured expressions, is what sets human language apart from other forms of communication found in the animal kingdom. While the recursion-only hypothesis presents a compelling argument for the uniqueness of human language, it remains tentative and requires empirical validation.

Chomsky et al. (2002: 1573-1574) propose three hypotheses regarding the evolution of language: (1) FLB is homologous to animal communication, (2) FLB is a uniquely human adaptation, and (3) only FLN is uniquely human. HCF (2002: 1574) provides evidence that FLB may be shared with animals, noting that birds and non-human primates can distinguish human speech sounds. However, they assert that only humans can combine smaller structural units into larger ones, indicating a unique complexity in human grammar. HCF (2002: 1576) emphasized that the recursion-only hypothesis was a bold one, and that its validity had yet to be tested empirically.

Critics, particularly Pinker and Jackendoff (2005), challenge the recursion-only hypothesis, arguing that recursion is not exclusive to language and exists in other cognitive systems. They highlight unique human conceptual systems and grammatical features, such as phonology and morphology, which are overlooked by the recursion-only hypothesis.

Pinker and Jackendoff also critique the Minimalist Program (Chomsky 1995), which posits that Universal Grammar, experience, and general principles govern language design (Chomsky 2005: 1-22). They argue that the Minimalist perspective is still underdeveloped and that the conclusions drawn from it are questionable.

FHC (Fitch et al. 2005:197-210) respond to PJ's critiques, asserting that while PJ agree with the distinction between FLB and FLN, they misunderstand the essence of role of recursion. FHC maintain that recursion is a core feature of FLN and argue that there is insufficient evidence for recursion in animal communication or other cognitive domains. They emphasize that the faculty of language in the broad sense includes all language-related capacities.

Ultimately, Jackendoff and Pinker (2005: 211-225) reiterate their support for the FLB/FLN distinction while emphasizing that recursion is not present in animal communication systems. They argue that human visual cognition exhibits recursion and discrete infinity, further complicating the recursion-only hypothesis by highlighting non-recursive grammatical aspects. Although FHC deny a direct link between recursion and the Minimalist Program, recursion is connected to Merge within that framework.

# **3.3. Language Evolution**

The emergence of human language has sparked a longstanding debate between gradualism and mutationalism in evolutionary theory. Noam Chomsky, representing the gradualist perspective, argues that language must adhere to the perfect laws of nature (Chomsky 1995). However, he pointed out that the essential characteristics of language have remained stable over 50,000 years, and that language-specific principles appeared rapidly (Berwick and Chomsky 2016). Chomsky proposes that language arose from genetic mutations leading to functional brain variations, particularly the emergence of the core property of language, known as Merge. He posits that these mutations first occur in individuals, leading to the Language of Thought and enabling complex cognitive abilities. This process is independent of external pressures and focuses on the brain's inherent properties (Hauser *et al.* 2002: 1571).

In contrast, the PJ/JP camp, influenced by Darwinian principles (Darwin, 1809-1982), views language as an adaptive system shaped by natural selection. Jackendoff and Pinker (2005) argue that language evolved gradually from simpler communicative systems, with syntactic complexity developing to enhance communication efficiency. Jackendoff and Pinker assert that the faculty of language is a result of adaptations that build upon earlier forms, supporting the notion of gradual evolution.

Pinker et al. seek evidence for their hypothesis through various avenues, including the study of language development in children and genetic factors like the FOXP2 gene. They also critique Chomsky's apparent inconsistencies regarding language evolution, particularly his shifting views on the role of natural selection (Jackendoff & Pinker 2005: 213). However, this inconsistency may be reconciled by distinguishing between the broader and narrower definitions of the language faculty. Overall, the debate continues as both perspectives offer insights into the complex evolution of human language.

# **3.4. Language Functions**

There is no denying that language can be used either for thought or communication. But which of the two is the primary function? HCF/FHC and PJ/JP hold opposing views: HCF/FHC believe that language is used for thought, while PJ/JP believe that language is used for communication.

Since Aristotle, language has been viewed as sound with meaning (Chomsky 2013), but Chomsky critiques this "sound-meaning" perspective, arguing that language is fundamentally meaning expressed through sound, with externalization including gestures. He highlights that sign language and spoken language share structural and neural similarities, despite differing in form (Chomsky 2007). Chomsky challenges the idea that language is primarily a communicative tool, suggesting it was not created for a specific purpose, similar to other biological systems. He distinguishes between function and purpose, asserting that while language can facilitate communication, its primary role is to express thought. Additionally, he notes that natural language is an imperfect communicative tool due to factors like structural ambiguity and morphological changes.

PJ/JP refute Chomsky et al.'s claim that FLN may approximate a kind of "optimal solution" to the

problem of linking the sensory-motor and conceptual-intentional systems. Chomsky (Pinker & Jackendoff (2005: 226; Chomsky 2000: 111) himself argues that language appears on the surface to be full of imperfections and redundancies. Moreover, if a language is not designed for communication, it is difficult to explain these questions: Why does a language map structural expressions to a speech interface? During language acquisition, why is it necessary for children to be exposed to the external language environment in order to acquire a language? They argue that the innateness hypothesis is not about inventing a language, but about learning a language from the environment.

In a nutshell, the principal differences between HCF/FHC and PJ/JP boil down to Table 1.

	HCF/FHC	PJ/JP
Recursion	Unique to Language	General Cognition
Evolution	Mutation; Saltation	Gradualism; Natural Selection
Function	Thought	Communication
Methodology	Homology; Analogy	Homology

From their debates, it is evident that HCF/FHC and PJ/JP find common ground on several key points:

(1) Distinction of Language Faculty: Both groups differentiate between two types of language faculty: the faculty of language in the broad sense and the faculty of language in the narrow sense. The former encompasses the sensory-motor system, the conceptual-intentional system, and the faculty of language in the narrow sense itself.

(2) Evolutionary Connection: Both parties recognize that the faculty of language is intrinsically linked to evolution. They agree that language is a natural object and a significant component of the human mind, emerging as a result of evolutionary processes.

(3) Interdisciplinary Research: Both HCF/FHC and PJ/JP acknowledge the importance and necessity of interdisciplinary research in the study of language. They assert that language research cannot be conducted in isolation and must be integrated with insights from other disciplines.

However, the two sides diverge on several critical points:

(1) Language Faculty: HCF/FHC argue that most features of the faculty of language in the broad sense (FLB) are shared between humans and animals, asserting that only recursion is unique to human language. In contrast, PJ/JP deny that recursion is exclusive to language, claiming that it also exists in other cognitive domains.

(2) Language Evolution: HCF/FHC contend that language does not evolve through external selection pressures but rather arises from genetic mutations without any intermediate stages. Conversely, PJ/JP argue that language is a system that evolves gradually through a complex process of natural adaptation, emphasizing the role of gradual change and environmental influences.

(3) Language Function: PJ/JP maintain that the primary function of language is interpersonal communication, focusing on its role in social interaction. In contrast, HCF/FHC assert that the main function of language is the expression of thought, highlighting its cognitive and representational aspects.

These points of agreement and disagreement illustrate the complexity of the discourse surrounding language evolution and the faculty of language, reflecting the diverse perspectives and methodologies that scholars bring to this multifaceted field of study. The ongoing dialogue between these two camps

enriches our understanding of language as both a cognitive faculty and a product of evolutionary processes.

#### 4. SUBSEQUENT INFLUENCE

### **4.1. Furthering the Study of Language Evolution**

This influential debate has significantly brought the issue of language evolution to the forefront, attracting a growing number of scholars eager to explore this complex topic. Numerous conferences dedicated to the subject have been held around the world, resulting in a wealth of findings in the fields of evolutionary linguistics and biolinguistics. Notably, Oxford University Press has published a series of monographs focusing on the evolution of language and biolinguistics, including titles such as *Studies in the Evolution of Language* and *Studies in Biolinguistics*. Additionally, both Oxford University Press and Cambridge University Press have released comprehensive volumes, namely the *Handbook of Evolutionary Linguistics* and the *Handbook of Biolinguistics*, respectively, which showcase cutting-edge research and advancements in these fields.

Historically, generative grammarians had given little attention to the evolution of language. However, in the wake of this debate, many prominent figures in generative grammar have shifted their focus to include language evolution in their research agendas. Scholars such as Berwick and Chomsky (2011, 2016), Piattelli-Palmarini (2010), Piattelli-Palmarini and Uriagereka (2004, 2011), Hornstein (2009), Miyagawa (2017), Nóbrega and Miyagawa (2015), Di Sciullo (2013), and Progovac (2015, 2017, 2019), along with Progovac and Locke (2009), have joined the ranks of researchers investigating the evolutionary aspects of language. This shift indicates a growing recognition of the importance of understanding language not only as a cognitive faculty but also as an evolutionary phenomenon, leading to a richer and more nuanced exploration of how language has developed in the human species. The collaborative efforts and interdisciplinary research emerging from this debate promise to yield further insights into the origins and evolution of language, enhancing our understanding of this uniquely human trait.

#### 4.2. Revising the View of the Faculty of Language

This debate has led quite a number of scholars to realize that Merge is not unique to FLN. Di Sciullo and Jenkins argue that recursion is not unique to language, but also exists in other higher levels of cognition. Kinsella (2009), through studies of human cognitive systems, animal cognitive systems, and nonhuman communicative systems, found that recursion is widely present in numerical, cognitive and communicative domains such as navigation, music, and games. Hauser and Watumull (2017) study also found that recursive operations exist in language, mathematics, music, and moral concepts, and proposed the idea of Universal Generative Faculty (UGF), according to which a set of content-free Specific content generative procedures interacting with different knowledge domains can produce expressions with content in actions and thoughts (Figure 1).



Figure 1.

The question of what constitutes the necessary ingredients for the faculty of language in the narrow sense (FLN) has prompted considerable speculation among scholars. One influential perspective is presented by Miyagawa et al. (2014), who propose that two distinct systems existed independently long before the emergence of language. The first is the lexical system, which can be observed in non-primate vocalizations, such as calls used for communication. The second is the expressive system, exemplified by phenomena like birdsong. According to this view, it is the combination of these two systems that ultimately gives rise to the unbounded hierarchical structures characteristic of human language.

Building on this foundation, Boeckx (2009), Hornstein & Pietroski (2009), and Hornstein (2009) delve deeper into the structure of Merge, a fundamental operation in syntax. They argue that Merge can be decomposed into two components: Concatenate and Labeling. Concatenate is posited to be a non-language-specific operation, suggesting that the ability to combine elements is not unique to human language. In contrast, Labeling is considered a product of the recent evolutionary development of language, attributed to genetic mutations. This aspect of Merge is seen as a defining characteristic of FLN, highlighting its role in the unique complexity of human linguistic structures.

Additionally, advancements in neuroscience have provided insights into the brain mechanisms underlying Merge. Researchers such as Fukui (2017) and Friederici (2017) have conducted neural experiments that indicate activation of Broca's area during syntactic Merge operations. This finding suggests a neurophysiological basis for the Merge operation, reinforcing the idea that certain cognitive processes involved in language are deeply rooted in our brain's architecture.

## 4.3. Promoting Inter-disciplinary Development

Chomsky (1986: 270) has consistently emphasized that linguistics should be regarded as a branch of psychology, ultimately rooted in biology. He refers to the study of Generative Grammar as Biolinguistics. While Chomsky's early research primarily relied on critical thinking and introspection to develop a theoretical linguistic framework, he now advocates for a more integrated approach that combines insights from various disciplines, creating an interdisciplinary, multidisciplinary, or even transdisciplinary research landscape that includes fields such as anthropology, biology, psychology, and neuroscience. This shift underscores the necessity of empirical research to validate, refine, and revise linguistic theories.

Both sides of the debate have actively engaged experts and scholars from diverse disciplines to participate in the discussion. They collaborate to gather more robust and reliable evidence for their respective theories while also striving to refute opposing viewpoints and identify weaknesses in their rivals' arguments. This ongoing dialogue not only drives both sides to continually refine and revise their theories but also fosters a richer understanding of language itself.

As a result, language research has transcended the exclusive domain of linguists, with theoretical criticism propelling linguistics into the forefront of interdisciplinary inquiry. This collaborative environment encourages innovative approaches and methodologies, allowing researchers to draw on a wide array of perspectives and techniques. The integration of various disciplines enhances the study of language, paving the way for a more comprehensive understanding of its complexities and the cognitive processes that underpin it.

### 5. CONCLUSION

These disagreements and contradictions give rise to controversies that are ultimately valuable for scientific progress. Chomsky, as a theoretical linguist, focuses on developing theories through

theoretical reasoning to achieve explanatory adequacy. In this pursuit, he may temporarily set aside certain facts that contradict his theories. In contrast, PJ/JP expose the shortcomings of HCF/FHC's assertions by grounding their arguments in extensive empirical research and linguistic evidence.

The distinction between FLB and FLN has proven particularly valuable in the study of language evolution. Both sides of the debate strive to present facts and reasoning to persuade others. The emergence of diverse perspectives on the same issue is crucial for scientific inquiry, as it promotes divergent thinking and enriches the overall understanding of the subject.

Therefore, internal criticism presupposes an understanding of the opponent's theory and proceeds on the basis of some common assumptions, otherwise the criticism is invalid. For example, Everett (2005: 621-646) finds that some languages (e.g., Pirahã) do not have recursive features, and attempts to deny the recursive assumption of FLN and thus the existence of a universal grammar across the board. However, a closer analysis reveals that Everett's definition of recursion is still the traditional one, i.e., the repetition or nesting of the same structural components. The concept of recursion used by Chomsky, on the other hand, refers to the iterative use of Merge. In this sense, even simple sentences are recursive. Therefore, different definitions of recursion are bound to lead to some pointless debates.

Finally, it should be pointed out that it is important to maintain the consistency of the concepts referred to in the terminology, and the inconsistency in HCF/FHC's formulation of the FLN has led to some debates that could have been avoided. In the abstract of HCF (Hauser et al., 2002: 1569), it is mentioned that the faculty of language in the narrow sense only includes recursion. However, in the main text (Hauser et al., 2002: 1571), it is stated that a key component of FLN is a computational system. The implication is that FLN may contain other components besides the core recursive operations. Thus, there is a lack of consistency in the definition.

The debate between the two sides is unlikely to conclude anytime soon and will likely persist for many years to come. Its significance extends beyond the content of the papers themselves; it embodies a process of reflection and inquiry driven by humanity's curiosity and desire to understand our own nature. This process encourages individuals to break free from traditional thought and push the boundaries of their intellect. Furthermore, it underscores the vital role of theoretical criticism in fostering intellectual progress and development.

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