Original Research Article

Persuasion and Interaction: The Rhetorical Use of Metadiscourse in Chomsky's Linguistic Discourse

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Abstract

The present study provides a qualitative and quantitative account of the rhetorical use of metadiscourse markers in Chomsky's *On Nature and Language*, claiming that interaction is an essential component of persuasion in social fields in general and in linguistic discourse in particular. Persuasion, therefore, relies on effective argument and writer-reader interaction as writers are uncertain when dealing with human subjects and data, on one hand, and unable to draw on empirical demonstration or trusted quantitative methods (Hyland, 2000). As a result, writers use language to engage their readers by positioning, persuading and including them as discourse participants (Hyland, 2019). Chomsky's linguistic discourse received several studies, however, writer-reader interaction as an integral component of the construction and attainment of ethos was marginalized and overlooked. Accordingly, the study hypothesizes that metadiscourse plays an essential role in Chomsky's persuasive discourse. Moreover, the study addresses the question of how metadiscourse is deployed to engage and persuade the reader, on one hand, and to create a credible persona, on the other hand. The study identified 4,724 instances of metadiscourse in a corpus of 38,183 words. This is a frequency of one every 8 words. It also shows that instances of interactional metadiscourse are significantly greater than interactive ones, and the most frequent categories are engagement markers (35.9), hedges (27.1), transitions (18.7) and boosters (16.1).

Keywords: Metadiscourse, Rhetoric, Chomsky, Linguistic Discourse.

1. INTRODUCTION

This paper presents a detailed analysis of the rhetorical use of interactional metadiscourse in Chomsky's *On Nature and Language*. It investigates Chomsky's academic discourse and addresses writer-reader interaction in the intersection of philosophy, science and linguistics. It also seeks to analyze how Chomsky positions, engages and persuades his reader.

Chomsky's *On Nature and Language* is an edited book by Adriana Belletti and Luigi Rizzi. It constitutes the intersection among science, philosophy and linguistics and represents the "clearest and most elegant" introduction to the generative theory which represents a "significant landmark" in the development of linguistic theory. The book is divided into 5 chapters. Chapter one is introduced by Adriana Belletti and Luigi Rizzi. Chapter 2 'Perspectives on language and mind' (45–60) and Chapter 3 'Language and the brain' (61–91) are the published versions of Chomsky's lectures. Chapter 4, the pivot, is "An interview on minimalism" (92–161).

The problem of the present study is two folds. Although there are a number of studies about Chomsky's language in linguistic discourse (Harris, (1989); Beaugrande, (1991); Werry, (2006); Feng, (2022)), little attention has been paid to how he rhetorically uses metadiscoursal resources to positions, engage, and persuade his reader. On the other hand, theoretically, metadiscourse markers are multifunctional and the overlap is especially clear between credibility and affect interaction markers (Hyland, 2019, p. 100). The overlap is context sensitive and requires an in-depth analysis to determine whether credibility is an affect in disguise or not. The study hypothesizes that metadiscourse plays an essential role in Chomsky's persuasive discourse. Secondly, the overlap between affect and credibility is minor in theoretical text.

In the light of the above problem, the following questions are addressed:
1. What are the metadiscourse categories used by Chomsky's *on Nature and Language?*

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2. Does interactional metadiscourse used by Chomsky differ significantly across genres (lecture and interview)?
3. How does Chomsky use metadiscourse to attain rhetorical appeal?

The study aims at:
1. Providing a detailed mixed method description and analysis of Chomsky's use of metadiscourse and its rhetorical effect.
2. Showing that metadiscourse markers are essential for the formation of persuasive discourse.
3. Analyzing context sensitive examples to determine how rhetorical appeal is attained.

This study is significant for two reasons. Firstly, it shows that metadiscourse is not limited to pedagogical orientation. It is a multifunctional concept that encompasses a wide range of phenomena. Secondly, it contributes to the understanding of how Chomsky deploys metadiscoursal resources to establish a credible and persuasive persona. It is part of the ongoing discussion of the relation among power, language and academic writing by adopting a new perspective on Chomsky's rhetorical strategies. It also helps students and specialists to grasp and compare the rhetorical strategies of influential figures.

2. LITERATURE REVIEW

Harris (1989) argues that Chomsky's success was not only based on the content of *Syntactic Structures* but also on the strategic use of rhetoric which has a great impact on the presentation of a new theory to the field of linguistics. Harris offers a multilayered analysis of Chomsky's compelling argument by showing how the style of *Syntactic Structures* overpasses the propositional content and that the force of his thought and personality engages and leads the reader directly.

Chomsky's impact on linguistics is unquestionable and revolutionary. He has developed and modified his theories several times. From 1960s to 1970s, he developed the Extended Standard Theory. In 1980s, he modified it to a new label called Government-Binding Theory. Needless to say that Chomsky's impact headed three of the six formal models of grammar: Transformational Grammar, Extended Standard Theory and Government-Binding Theory. While the other three models: Generative Semantics, Lexical-Functional Grammar and Generalized Phrase Structure Grammar represent different types of Generative Grammar. In other words, they are triggered by Chomsky's theories.

Chomsky has also revived the rationalist philosophy in linguistics and brought it to a neighbouring field such as psychology and it was the main instrument by which he severely criticized the behavourist psychology.

Harris shows that Chomsky is a consummate arguer who skillfully engages the audience directly and blends his theory with rhetorical finesse to attack Bloomfield's weakest points (neglecting syntax and the problem of semantics). He points out that the rhetoric of *Syntactic Structures* relies on two types of appeals: logos and ethos. The former, according to Harris, is the most persuasive feature of the book in which Chomsky deploys tight reasoning and the systematic use of illustration. The latter is accomplished primarily by conducting argumentation in the tone of authority together with appeal to science.

Perhaps one of the most influential analyses of Chomsky's language is Beaugrande (1991), in which he observed that Chomsky's language is unique and requires a thorough analysis and that the striking use of language facilitates his authority over the field of linguistics. Beaugrande's analysis aims at showing the key moves of Chomsky's discourse and relating them to the ideologies and interests which disguise privileges and inequalities as the "natural order" or "the way the world is".

Beaugrande states that Idealism and radical dualism is among the major concerns that the analysis is trying to uncover. The conflicting domains (idealism and scientism) renders two different veins. On the one hand, they propose insightful argument about human mind and legitimize theses. On the other hand, they are used as a weapon against rivals who are usually described as simple-minded. Dualism is used to fuel idealism by the use of explicit logic but its implicit rhetoric discriminates between knowledge and experience on the basis of submerge dualism and scientism to construct an authority that is apparently empiricist to "justify their anti-empiricist position".

He further adds that Chomsky's dualism is self-evident in competence and performance, surface structure and deep structure. Though performance is acknowledged, competence is prioritized which is a movement away from objectivity. Moreover, intuition replaces the objective methods which are described as being unfit. Furthermore, his linguistic and political stances are very different. As a political analyst, he believes that knowledge is gained from experience and historical records which are direct and objective in revealing facts. But in linguistics, idealization and abstraction is what matter most.

Beaugrande argues that Chomsky is self-centred, "dogmatic and aprioristic" when arguing against scientific methods such as data collection and analysis, stressing that intuition is prior to any other method. He also points out two types of strategies used by Chomsky to fend off counter argument: blurring and inclusion. For example, blurring body\mind dualism by equating the body with "intuitive mechanism" and including the systems of knowledge as a biological nature.

In a similar study, Werry (2007) notes that the language of linguistics hasn't received a rhetorical or reflexive analysis unlike other fields of social sciences. In this attempt, he analyses Chomsky's rhetoric in linguistic discourse beginning with Chomsky's statement that ''the best rhetoric is the least rhetoric'', aiming at showing that there is a general marginalization to consider linguistic discourse as an object of study. He adds that Chomsky's discourse is characterized by constant rhetoric and reflexivity to reach an independent explanation of language. Chomsky's rhetoric is, therefore, described as ''ocularcentric'' which is based on "transparency and immediacy".

Werry distinguishes between strong and light types of rhetoric and describes their possible implications for linguistic paradigm. Like Harris and Beaugrande, Werry cites Olson and Faigley's invitation to consider Chomsky's rhetoric as an integral part of his success in linguistics. He adds that Chomsky's discourse represents a spectacular anti-rhetoric stance who skilfully uses language persuasively. Werry mentioned a number of discursive strategies used by Chomsky such as naturalizing the difference between language and mind, ideal speaker and listener, subsuming language as both a reflection and a function of the cognitive system, conflating the difference between linguistic terms and mental reality of grammar, minimizing the linguist's role as an agent who analyses linguistic knowledge and attributing agency to grammar.

Concerning Chomsky's visual rhetoric, Werry distinguishes between visual figures used to construct linguistic discourse and visual figures used to construct the rhetoric of undeniability. He concludes that Chomsky's discourse is based on visual rhetoric-''ocularcentric'' that no argument is needed if the eye sees the truth; otherwise one will be persuaded. It is doubtless that Chomsky's use of metaphors, analogies and illustrations are to persuade; they are used to rebut counter argument as ocularcentric rhetoric is self-evident. Chomsky's denial of the importance of rhetoric in knowledge production is itself rhetorical; it creates ethos of "impartiality, honesty and humility" as he denounces its use.

In a different vein, Feng (2022) focuses on the rhetorical conflict and the discursive differences between Chomsky and Halliday claiming that the difference between them is of discourses of argumentation rather than an opposition of functionalism and formalism. He mentioned that the two approaches use incomprehensible and untransparent linguistic concepts which make them distinct, on one hand, and makes SFG weak on the other. Newmeyer (2003, p. 276–7) states that it is difficult to figure out what SFG is all about, mentioning that there is no real argumentation, hypothesis testing or empirical claims. On the other hand, Chomsky builds his argument on deductive reasoning, unverifiable hypotheses and what is unknown for the present. Feng shows that

Halliday acknowledges uncertainty and uses rhetorical devices to mitigate claim making such as "we cannot know for certain […]", "we do not know much about […]" (Halliday 1978, p. 53-64), while Chomsky asserts his argument and closes dialogue such as "this can only be done by taking into account […]" (Chomsky, 1965, p. 188), "these can only be regarded as […]" (Chomsky, 1965, p. 192). Hoey (2000) points out that Chomsky's style and rhetorical argumentation making his claims difficult to be challenged. On the other hand, Seuren (2004: 118) adds that Chomsky's school ignores counter argument and rival evidence and that it is theoretically inconsistent because of the fuzziness of the linguistic concepts.

The hallmark of Chomsky's discourse in linguistic is that it is rhetorical par excellence but what is clearly missing and hasn't been addressed quite sufficiently is the writer-reader interaction and the metadiscoursal resources that facilitate Chomsky's authority as Beaugrande has mentioned and the creation of undeniable rhetoric pointed out by Werry and Hoey. More importantly, this paper addresses Chomsky's linguistic discourse as an academic text, showing the distribution of metadiscourse makers in comparison to standard ones because as Hyland (2005, p. 191) that writers don't construct knowledge outside particular communities of practice.

2.1 Defining Metadiscourse

Studies in metadiscourse begin in the 1980s with the recognition that metadiscourse represents a "specialized form of discourse". The problematic nature of metadiscourse and its complexity have led scholars to develop an operational definition to the concept of metadiscourse. Accordingly, there are two lines of enquiry in metadiscourse: the broad one and the narrow one (Adel & Mauranen, 2010).

The narrow approach is also called the reflexive or the "thick" approach (Mauranen, 1993; Adel, 2006; Adel & Mauranen, 2010). This approach is qualitative and exclusive. It concentrates on the main function of metadiscourse which is guiding the reader through the text to facilitate the process of interpretation. Thus, it is concerned with "aspects of text organization" rather than the interpersonal aspect (Adel, 2006, p. 175). Metadiscourse, then, is a "text about the evolving text, or the writer's explicit commentary on her own ongoing discourse.

The broad approach is also called the integrative or interactive which is represented by the works of (Kopple, 1985; Crismore & Farnsworth, 1990; among others). Hyland's recent extensive works (1998, 2004, 2005, 2017, 2019) in metadiscourse are the best representatives of this approach. This approach is quantitative and inclusive in which metadiscourse refers to a wide range of overt markers that signals the writer's

stance and his/her engagement with the reader in discourse.

Kopple (1985) and Crismore *et al*., (1993) share this view of metadiscourse, for example, Crismore *et al*., define metadiscourse as:

Linguistic material in texts, written or spoken, which does not add anything to the prepositional content but that is intended to help the listener or reader organize, interpret and evaluate the information given Crismore *et al*., (1993, p. 40)

On the other hand, Hyland offers a more domain specific definition of metadiscourse which is interactional in spirit.

Metadiscourse is the cover term for the self-reflective expressions used to negotiate interactional meanings in a text, assisting the writer (or speaker) to express a view point and engage with readers as members of a particular community Hyland (2005, p. 37)

This definition has the following properties: (a) it includes self-reflective expressions that signal the writer presence in the discourse, (b) it recognises the interactional function of metadiscourse, (c) situates rhetoric in the interactional meaning of a text, and (d) emphasises that metadiscoursal meanings are communicated within a "particular community".

2.2 Academic Discourse and Rhetoric

Academic discourse is characterized as a rational and scientific form of writing which is based on clearly stated methodologies and procedures. It is an endeavor to demonstrate the effectiveness of logical sequence of steps to achieve an objective end. Its compelling persuasion lies in the empirical results and the logical procedures which construct the "discourse of truth" (Hyland, 2019, p. 78). It is an objective form of enquiry which is characterized as being a reliable knowledge a part from cynicism and partisan of political rhetoric.

However, academic writing has undergone a significant change in which persuasion has become an indispensable part of its formation. As a result, academic discourse has prioritized writer-reader interaction as a persuasive endeavor and diminished the objective and impersonal aspects.

Academic discourse which involves results discussion and theory evaluation is not solely after the objective representation of reality. It seeks to establish a form of engagement that constructs and negotiates social relations (Hyland, 2019, p. 79). To create a persuasive argument, writers deploy metadiscourse to offer credibility, claim solidarity with their readers, and control the level of interaction. Metadiscourse is, then, a powerful tool which facilitates the process of rhetorical

construct, creates a convincing reader-environment and enhances text persuasiveness.

2.3 Metadiscourse as an Approach to Rhetoric

Metadiscourse allows writers to express their attitude, engage with their readers and anticipating their possible reactions and needs. Since metadiscourse is associated with purpose of the writer, it contributes to the study of rhetoric when it relates arguments rationally, facilitates the creation of credibility, and expresses affective appeal. Metadiscourse is, therefore, relates to rhetoric and not only to "aspects of text organization" (Adel, 2006, p. 175).

Of great significance to the persuasive use of metadiscourse is Aristotle's classical appeals to rhetorical construct: logos, ethos, and pathos. Ethos is concerned with the writer's credibility which is established either prior to the text or reestablished through the text. It, in this sense, is considered to be a dynamic concept that emerges through writer-reader interaction as the text unfolds.

2.3.1 Logos

Rational appeal is a persuasive device that is concerned with the propositional content of the text. It is the writer's choice of how to define problems, support claims, state conclusions. These are crucial for the overall persuasive construction of the text and the reader's acceptance of argument.

Interactive metadiscourse plays a crucial role in the arrangement of text which facilitates the reader's understanding of the text by using logical connections, explaining, adding, comparing, sequencing that guide them through the information.

2.3.2 Ethos

Categories of metadiscourse which contribute significantly to the construction of credibility are hedges, boosters, evidentials, engagement markers and self-mention. These categories are essential for writers to project themselves into the text, claiming the right to be heard, constructing an authority and presenting a competent persona.

- Hedges contribute the construction of credibility by mitigating claims and balancing cautious with commitment. They distance the writer and invite the reader to be involved in the discourse by creating a space for claim negotiation which conveys an ethos of frankness and openness.
- Boosters, on the other hand, closes the discourse. It shows the writer's responsibility for the claim and establishes the writer's presence, confidence and certainty as a trustworthy and credible authority.
- Evidentials are used as an external source of information which represent the writer's endorsement of information especially when

they are followed by positive evaluation. It is the shortest way to gain credibility and the easiest one particularly when evidentials are attributed to reputable source of information.

- Engagement markers are inclusive devices which involve the reader into the discourse as a participant. They reflect the writer's authority, integrity and credibility by anticipating the readers' possible objections and acknowledging their presence as discourse participants and positioning and pulling them into the argument and guiding them to the intended interpretation.
- Self-mention is the writer's conscious choice of the degree of his\her presence in the discourse. It is particularly an important category in the construction of ethos when combined with boosters. It is the writer's self-representation which positions the writer's in relation to the argument, reader, and community.

2.3.3 Pathos
Beside Ethos, writers also attend to affective appeal by considering the reader's attitude to the argument. It aims at directly involving the readers into the text by acknowledging their perspective and eliciting their response. The use of metadiscourse in this case is intended to consider the reader's prospective by creating an engaging dialogue that addresses the reader through the text. Engagement markers, attitude markers, hedges, self-mention and pronoun reference are among the metadiscoursal categories that contribute to the construction of pathos.

2.1.4. The Model of Analysis
The model of analysis is based on (Hyland, 2019) which includes the two fundamental types of metadiscourse: interactive and interaction. Logos is situated in the interactive type and includes markers that make the text understandable by explicitly marking relationships between sentences such as comparing, sequencing, adding, and explaining. On the other hand, ethos and pathos are interactional and multifunctional. They are context-sensitive and require a close analysis. They represent the writer's conscious choice to mark the degree of presence into the text, establish credibility, attend to the readers' prospective and guide them personally to the desired interpretation. The following table summarises the model of analysis.

Table 1: Categories of Metadiscourse (Hyland, 2019)

Type	Category	Function	Example
Interactive	Transitions	Express relations between main clauses	moreover, similarly, likewise, thus, therefore, etc.
	Frame markers	Refer to discourse acts, sequences or stages	at the same time, next, to summarize, etc.
	Endophorics	Refer to other parts of the text	see Figure 2, as noted above, etc.
	Evidentials	Refer to the source of information	according to…, as x states…, etc.
	Code glosses	Supply additional information, (rephrasing, explaining or elaborating)	in other words, that is, for example, etc.
Interactional	Hedges	Withhold commitment and open dialogue	likely, probably, may, seem to, etc.
	Boosters	Emphasise certainty or close dialogue	it's clear, obviously, must (epistemic), etc.
	Attitude Markers	Express writer's attitude to individual, proposition	unfortunately, surprisingly, I wonder, etc.
	Engagement Markers	Address readers to focus their attention or include them	you, your, inclusive we, by the way, you may notice, etc.
	Self-mention	Explicit reference to author(s)	I; we; my; me, etc.

3. METHODOLOGY AND PROCEDURE
Since metadiscourse is a multifaceted concept that encompasses wide range meanings through which writers create rhetorical appeal and because metadiscourse is concerned with purposes of writers; it rhetorically contributes to "the rational, credible and affective appeals which have characterized persuasive discourse" (Hyland, 2019, p. 75). This paper draws on both quantitative and qualitative approaches, encompassing a corpus of 38,183 words and two types of genres written and spoken, collected from *On Nature and Language* by Adriana Belletti and Luigi Rizzi. The corpus consists of five chapters, three of them are the object of analysis as they represent Chomsky's linguistic discourse. Chapter 2 'Perspectives on language and mind' (45–60) and Chapter 3 'Language and the brain' (61–91) are the published versions of Chomsky's lectures. Both are essays on the history and philosophy of science, raising the question of whether principles of cognition might be unified with those governing the physical world. Ch. 4 is 'An interview on minimalism' (92–161), in which Chomsky replies to questions posed by Belletti and Rizzi about the goals, internal structure, and achievements of the MP. This chapter and the three

that precede it assert that, as a result of this program, 'it has become possible to pose in a productive way the question of the ''perfection of language''

These three chapters are selected to represent a cross-section of the distribution and use of metadiscourse in Chomsky's linguistic discourse. The value of this corpus is that it explores categories of metadiscourse in natural discourse that reflect the practice and experience of Chomsky's rhetorical use of language as a member of academic community.

The text was converted to electronic corpus of 38,183 words and categories of writer-reader interaction were spotted by using *AntConc* 3.5.9*,* a concordance programme. A list of 498 potential productive items is compiled from (Hyland, 2019) and searched for in the word list generated from *AntConc*. Resources of metadiscourse were examined in context to ensure that they function interactionally. The results follow the standard mean (per 1000 words) of comparison of the frequncy of occurence. The analysis is further reinforce by extracting cases of Chomsky's use of interactional metadiscourse and annotated manually.

4. FINDINGS

A general description of the frequencies of the use of metadiscourse reveals its importance for attaining a persuasive effect in a book that represents the "clearest introduction" to the theory. Metadiscourse is particularly important for making a philosophical book accessible for readers (students and researchers) and attempting to negotiate issues such as history, science and philosophy in ways that are meaningful and appropriate for the linguistic community. In addition, it reveals the writer's awareness of the reader's contextual resources, processing abilities, and experiences. On the other hand, it facilitates the construction and attainments of persuasive effect by relating argumentative appeals: ethos, pathos, logos and by which the writer builds an appropriate authoritative person that mediates the writer's relation to arguments and audience.

Metadiscourse in *On Nature and Language* is an integral part of Chomsky's discourse and this is shown by the identification of 4,724 cases in 38,183 words corpus. This is a frequency of one every 8 words. It should be noted that this is not the total number of instances because metadiscourse is multifunctional and operates at different levels and different lengths. Besides, it can be realized explicitly and implicitly. The frequencies presented in this section are, then, used to provide a cross-section of the rhetorical use of metadiscourse.

Table (1) shows that instances of interactional metadiscourse are significantly greater than interactive ones, and the most frequent are engagement (35.9) markers and hedges (27.1) followed by transitions (18.7) and boosters (16.1).

The high use of engagement markers represents (35.9) and 40.2% of all interactional metadiscourse is clearly rhetorical in that it explicitly addresses the readers and includes them as discourse participants through the use of inclusive forms such as *we, our, you* and *us*.

Engagement markers are strategically used to create ethos of integrity and credibility by blending and merging the readers' stance with Chomsky's one. It is the same strategy of inclusion that pointed out by Beaugrande to fend off counter argument such as equating the body with "intuitive mechanism" and including the systems of knowledge as a biological nature. It involves readers positioning and inclusion (1,2,3), to deter their possible objection and guide them to the likely interpretation (4):

1. A state attained by this faculty resembles what is called "a language" in ordinary usage, but only partially: we are no longer surprised when notions of common sense find no place in the effort to understand and explain the phenomena they deal with in their own ways,
2. Motion of the limbs, thinking, acts of will – all are "beyond our understanding," though we can seek to find "general principles" and "bodies of doctrine" that give us a limited grasp of their fundamental nature
3. Let us now look more closely at the three theses – reasonable I think, but with qualifications-
4. For example, at the sensorimotor level you couldn't have a word that wasn't spelled out phonetically because the sensorimotor system would not know what to do: you couldn't have an orthographic word, for example. And the same is going to be true at the thought end: you have got to eliminate the uninterpretable features. Hedges is the second highest representing (27.1) and 30.3% of all interactional uses. This percentage demonstrates that Chomsky presents his claims as negotiable and recognizes opposing views. Thus, the most frequent use of hedges is that of possibility which opens a discursive space for counter claims and withhold commitment. Chomsky is cautious and tentative because claim-making represents the writer's subjective opinion and to maintain ethos he bases his use of hedges on deduction and presents claims as the most likely.
5. In terms of general scientific understanding, which may turn out to be inadequate to the task of unification, as has regularly been the case for 300 years.
6. For simple organic systems, conclusions of this sort seem very reasonable, and even partially understood.
7. Even in early exploratory stages, there are results that are quite suggestive, and it may be possible to design experimental programs that

would yield important new kinds of information about the nature of the language faculty and the way it is accessed and used.

8. Clearly, minimalist explanation is a different concept from explanatory adequacy: explanatory adequacy, in the technical sense mentioned above, could be met by a system not corresponding to minimalist desiderata (for instance, the assumption of an innate list of island constraints could reach explanatory adequacy in certain domains as well as a unifying, simple locality principle, but only the latter would probably meet minimalist standards). Transitions are third most frequent which represent (18.7) and 54.4% of the overall interactive metadiscourse and their importance are quite significant in connecting internal relations in discourse. They disambiguate internal relations by performing functions of adding (9), comparing (10), consequencing (11).

9. Furthermore, the semantics of natural language and of formal languages seem to be totally different, at least in my opinion.

10. Until the 1950s there was no clear expression of the problem; the fact that on the one hand you had the problem of describing languages correctly, on the other hand you had the problem of accounting for how anyone can learn any of them.

11. One would therefore expect that the features that enter computation should be Language and the brain interpretable, as in well-designed artificial symbolic systems: formal systems for metamathematics, computer languages, etc. Boosters represent (16.1) and 18.1% of the overall interactional metadiscourse and are about half the instances of hedges in number. Chomsky uses boosters at critical points to confront counter argument (12), emphasise certainty and involving the reader through the use of personal pronoun to construct a joint position against alternative voices (13).

12. Actually you can use language even if you are the only person in the universe with language, and in fact it would even have adaptive advantage.

13. And it had to be one or the other because everything was a construction, but in fact they seemed to be the same thing. It was the kind of controversy where you know you are talking about the wrong thing because it doesn't seem to matter what you decide. Well, the right answer is that there aren't any constructions anyway, no passive, no raising: there is just the option of dislocating something somewhere else under certain conditions, and in certain cases it gives you what is traditionally called the passive and in other cases it gives you a question and so on, but the grammatical constructions are left as artifacts.

14. "But the facts are clear and you can see the same facts that you see in wh questions; you can state the principles that yield the interpretive facts…". The use of boosters together with reader involvement as a direct participant in the discourse creates an ethos of integrity and honesty by which the reader is guided to the intended interpretation in the most objective way. This strategy is also used with engagement markers particularly with the use of inclusive forms such as *we, our,* and *us*. A distinctive use of boosters is prominent when Chomsky combine boosters with self-mention which creates a competent ethos of authority by explicitly taking responsibility and expressing personal belief:

15. What are island conditions, for example? This has been a core topic of research for forty years now; I still don't think we understand that. There's certainly plenty of data that aren't understood; Paul Postal has a recent book about it and I am sure that it has tons of data that don't work in any imaginable way. Such problems abound. And also, to my knowledge at least, there is no really principled account of many island conditions. On the other hand, something will remain stable. The difference between weak and strong islands looks stable; maybe we don't understand it, but there's something there that is stable. Also conditions on locality and successive cyclic movement look stable to me, at some level of abstraction. I strongly suspect that the difference between interpretable and uninterpretable features will turn out to be stable, though it is a recent observation, five years ago there was no discussion about it. Of marginal important to Chomsky's linguistic discourse is pathos and this is due to the purpose of the discourse and the philosophical nature of topics such science and history. However, attitude markers represent (5.7) and 6% of the overall interactional metadiscourse and express attitude towards propositions rather than affects.

16. An interesting topic that I will put aside.

17. Current controversies about mind and brain are strikingly similar to debates about atoms, molecules, chemical structures and reactions, and related matters, which were very much alive well into the twentieth century.

Table 1: Metadiscourse in Chomsky's on Nature and Language (per 1,000 words)

Category	Ch 2-3 (Written)	Ch 4 (Spoken)	All
Transitions	10	8.7	18.7
Frame markers	2	5	7.1
Endophorics	0	0	0
Evidentials	0.2	0.05	0.28
Code glosses	1.8	6.3	8.2
Interactive	14.1	20.2	34.4
Hedges	9.7	17.4	27.1
Boosters	4.7	11.4	16.1
Attitude Markers	2.5	3.1	5.7
Engagement Markers	11.7	24.1	35.9
Self-mention	1.5	2.8	4.3
Interactional	30.3	58.9	89.3

5. DISCUSSIONS

The findings show the importance of metadiscourse in the attainment of persuasive effect in Chomsky's linguistics discourse. The study identified 4,724 instance of metadiscourse in a corpus of 38,183 words consisting of two types of Chomsky's discourse: written and spoken. It is a frequency of one every 8 words and demonstrates the importance of metadiscourse in achieving rhetorical goals and creating a credible persona.

As table (1) shows, interactional metadiscourse is more than double the amount of interactive metadiscourse. A possible explanation is that interactive metadiscourse performs the function of guiding the reader through the text and the purpose of the text is to make the theory accessible to readers and researchers. As a result, interactional metadiscourse received more emphasis as it is reader oriented. Thus, interactional metadiscourse is heavily used, and in some situations, stretch of discourses were loaded with metadiscoursal forms such as (13) and (14).

Regarding engagement markers, reader involvement is an effective persuasive strategy which presents the information to the reader who evaluates the situation form Chomsky's lens. The use of reader pronouns (*you, your)* and inclusive forms such as (*we, our, us)* represent 648 instances of 1,371 which is equal to 47.2% of the overall engagement markers. Thus, this strategy ensures that the discourse is interpreted according to the desired end. Interestingly, it coincides with (Harris, 1989, p. 120) who states that Chomsky addresses the reader to reinforce his\her participation in the discourse, for example, "the reader can easily determine that…" and "as the reader can easily convince himself". In the same vein, Werry (2007, p. 73) adds that Chomsky presents his theory as inarguable and the inevitable production of objective and scientific approach. The generative grammar is, therefore, the natural unfolding of adopting the scientific approach and the opposing views are positioned to be unnatural and unscientific. To put succinctly, the opposing views to Chomsky's approach are opposing the objective, natural and scientific approach. The reader in Chomsky's lens, then, is competent and critical person who is able to find, determine and convince himself of the truth that he will reach objectively as Chomsky has reached.

The low frequency of code glosses supports this conclusion. Code glosses are concerned with additional information and the reader's knowledge by elaborating, explaining and rephrasing propositional content. They represent (8.2) 23% and frame markers (7.1) 20% of the overall interactive metadiscourse respectively. While endophorics are totally absent. These frequencies are contrary to the introduction of the book which is supposed to welcome students and researchers and presents the "clearest" introduction to the theory.

In considering hedges, it is the second highest category and is a key feature of academic discourse (Hyland, 1998) in which the writer's balances commitment and assertion, on one hand, and opens a discursive space for reader to negotiate issues under discussion. In the analysis of hedges, epistemic modals are the most frequent *may* (31 *n*), could (26 *n*), would (25 *n*), seem (21 *n*).

Table (1) reflects the significant role of interactional metadiscourse in the construction of ethos in Chomsky's discourse, especially the use of engagement markers with heavy emphasis on the reader's active participation in the discourse as demonstrated by Harris' examples mentioned above and other examples cited in this paper such as using inclusive pronouns (1, 2, 3), addressing the reader directly (12, 13) or combining boosters and engagements (14). This explains the difficulty of establishing proof and, in comparison to hard sciences, it is less reliable method (Hyland, 2019, p. 69). This could be attributed to the few empirical results that can be referred to as Newmeyer observes that "one is left with the feeling that the increase in Chomsky's triumphalistic rhetoric is inversely proportional to the actual empirical results that he can point to" (2003, p. 586). As a result, interactional metadiscourse plays a pivotal role in the attainment of persuasion in Chomsky's discourse.

6. CONCLUSION

The study presents a quantitative and qualitative analysis on persuasion and interaction and the primary role of metadiscourse in the construction of ethos in *On Nature and Language* as a cross section of Chomsky's linguistic discourse. The study shows that interactional metadiscourse is more than double the amount of interactive ones, and it plays a crucial role in the construction of Chomsky's ethos and the attainment of persuasion since, unlike hard science fields, social fields rely heavily on interactional metadiscourse due to the paucity of actual empirical results that they can refer to. Thus, writers cannot act in social vacuum and community of practice plays a significant role in constructing shared knowledge, values and assumptions (Hyland, 2005, p. 191).

Concerning the construction of ethos, the study points that reader involvement plays a vital role in the attainment of persuasion. In this respect, engagement markers are deployed either to address the reader through the strategy of inclusion in which Chomsky's plays the role of "community leader" or to directly addressing and positioning the reader as a competent and capable of verifying and evaluating the validity of claims.

An important limitation of this study is that metadiscourse is a multifaceted concept and approaching persuasion through metadiscourse requires adhering to the explicit markers and pre-determined categories. Further studies about implicit metadiscourse could provide more insights about the relationship between persuasion and interaction. It is hoped that this study provides a plausible description and characterization of the construction of ethos in Chomsky's linguistic discourse and to the understanding of how a famous figure who revolutionized the study of linguistics engages and interacts with his reader.

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