

Determining the Degree of Appeal to Aristotelian Rhetoric

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ABSTRACT: *Here, we contribute to the extant literature by proposing and testing a model for determining a degree of appeal to Aristotelian Rhetoric. We employed content analysis as a methodology to analyse data from debate transcripts. Our core findings confirm the applicability and analytical power of the proposed model. Three ranking dimensions, low, moderate and robust appeal, were proven to systematically and comprehensively drive debate analysis. They demonstrated the underlying mechanism of Aristotelian Rhetoric in understanding the utilisation of persuasion strategy in a debate. They also demonstrated how a conclusion can be drawn on the overall appeal and intensity when the three rhetoric are collectively weighed and ranked. We therefore concluded that the validated model addresses the research gap in perfecting the traditional Aristotelian Rhetoric in the contemporary period.*

KEYWORDS: degree, appeal, aristotelian rhetoric

INTRODUCTION

Here we surveyed twenty (20) different debate studies as a preliminary scoping of this study and found only five studies focused on climate change; three out of these made a direct analysis between Aristotelean rhetoric and climate action. There is little interest in exploring the degree of appeal per debate in the literature. There are also few studies with interest in analysing Aristotelian Rhetoric (AR) from the climate change perspective, likely because of its multidisciplinary and emerging nature. Indeed, studies surrounding rhetoric analysis often focus on analysing the rhetoric in debate or speech and concluding that the

debate or speech appeals to Aristotle's Rhetoric. Mohammad¹ for example, used quantitative methods, and descriptive and inferential statistics, to study the rhetorical evidence used to achieve the relevant rhetorical appeals to logos, ethos, and Pathos in the specific genre of the persuasive academic text of ENL and ESL research abstract. He found a significant correlation among the three rhetorical devices identified for each rhetorical appeal. In another study, Raihana Nurkhamidah and Ayu Ratna² employed descriptive qualitative methodology to explore rhetorical proofs used by Joe Biden in his inauguration address. The result shows that the speaker uses all of the Aristotelian rhetoric strategies in his inaugural address covering 55% of Pathos, 37% of ethos, and 8% of logos. The study concluded that Biden skillfully used and implied Aristotle's rhetorical theory. Similarly, In an attempt to contribute to both the public policy debate in Taiwan and the study of political rhetoric, Ko³ explore the content of ethos, Pathos and logos in Taiwan's President Ma Ying-Jeou's political discourse during the Cross-strait Economic Cooperation Framework Agreement. The finding indicates that Pathos is the most prevalent rhetorical strategy, while ethos is the least rhetorical strategy adopted by Ma. Related to these, Torto⁴ in his study using qualitative study design, he applied Aristotle's Rhetorical theory to analyse persuasive elements in English used in Ghanaian newspaper advertisements. The study found that copywriters in the Ghanaian print media employed Aristotle's three artistic proofs in English for advertisement for persuasive effect. These studies have one feature in common, a goal to analyse debates and conclude that a debate shows an appeal to the rhetoric.

Similarly, using descriptive content analysis, Malone⁵ used 100 documents that make arguments about climate change to analyse and characterised arguments made and to

¹ Mohamed Hairul Azhar, "Analysis of Rhetorical Appeals to Logos, Ethos and Pathos in ENL and ESL Research Abstracts," *Kuala Lumpur: Malaysian Journal of Social Sciences and Humanities (MJSSH)* Volume 7, Issue 3 (2022): 7.

² Nurkhamidah Neni, Ziani Fahira Raihana and Ningtyas Ayu Ratna, "Rhetorical Analysis of Joe Biden's Inauguration Address," *Journal of Linguistics, Literature and Language Teaching*. Vol. 7 No. 2. (2021): 76.

³ Hsiu-ching Ko, "Political Persuasion: Adopting Aristotelian Rhetoric in Public Policy Debate Strategies," *International Journal of Humanities and Social Science* Vol. 5, No. 10; October (2015): 115.

⁴ Richard Torto, "Aristotelian Rhetorical Theory as a Framework for Analysing Advertising Texts in the Print Media in Ghana," In *Theory and Practice in Language Studies* (Cape Coast, Ghana: University of Cape Coast. 2020), 269.

⁵ Elizabeth L. Malone, *Rhetorical Analysis of Arguments Made in the Climate Change Debate: Argument Families and Social Network Links as Potential Bases for Agreement*. Dissertation submitted to the Faculty of the Graduate School of the University of Maryland (College Park; University of Maryland, 2004), 9.

distinguish four rhetorical elements; the personal and organisational sources of authority of the rhetoric, the type(s) of evidence used for the claims made, the worldviews(s) expressed, and the actions proposed. The author designed these elements to provide the basis for categorising the documents into “families”, coherent arguments about climate change issues, and performing a social network analysis. The study found coherence within families and multiple links across families, indicating that rhetors in the climate change debate form a dense network of ties that could be used to build agreement. One of the limitations of this study is that it focused on argumentation within climate change agreements. The study is more concerned with network analysis and does not focus on the traditional Aristotelian Rhetoric. In a closely related study, which was motivated by the realisation of the gap that analysis of debate focused more on the aspect of delivery and style, Setiansah, Sutikna and Widodo⁶ Used descriptive data analysis to study the rhetorical analysis of Joko Widodo and Prabowo Subianto's presidential debate. They concluded that rhetoric not only covers Logos, Pathos and ethos. They attempted improved rhetorical analysis by applying five canons of rhetoric.

However, while these studies show the significance of AR to modern persuasive studies, they need to take into account the possibility of improvement in the approach of analysis to perfect the art of persuasion. The only highlighted element of appeals in a debate through analysis is whether a particular claim appeals to *logos*, *Pathos* or *ethos*. This gap is of interest to this study, and drawing empirical data to strengthen our understanding of rhetoric behaviour; we proposed that beyond concluding that a particular argument appeals to rhetoric by a certain percentage, it is more systematic and comprehensive to explore appeal to AR through analysis and weighted ranking in an abstractive way. This reveals rhetoric's entire utilisation behaviour in a given debate or speech. However, central to this study is how we rank a debate in order of utilisation or appeal to AR. What new perspective could we get from the conventional AR analysis and a weighted ranking model?

In response to this, a model which is rooted in AR theory is postulated. It intends to dissect, and segment appeals to any of the rhetoric and collectively rank them into an appeal intensity range. This enables us to explore AR utilisation behaviour at the individual level dealing with arguments and collectively at the debate level, thereby revealing areas of improvement concerning audience connection and influence. Thus, our study adds to the

⁶ Site Setiansah, Nana Sutikna, and Bambang Widodo, “Rhetorical Analysis of Joko Widodo and Prabowo Subianto at the 2019 Presidential Election,” *Proceedings of 3rd International Conference on Social Transformation, Community, and Sustainable Development Advances in Social Science, Education and Humanities Research* (Amsterdam: Atlantis Press, 2019), 5.

literature on persuasion, underlying the importance of an abstractive model for ranking the degree of appeal to AR.

THEORETICAL FRAMEWORK

We predicated this study upon the rhetorical theory Aristotle developed over 2000 years ago called a rhetorical theory. Rhetoric may be defined as the faculty of observing, in any given case, the available means of persuasion.⁷ The Aristotelean rhetoric of persuasion explicitly references the so-called "artistic proofs," called *Pistis* in Greek. Unlike the non-artistic proofs, these are means of persuasion which must be designed (or invented) by the speaker. The three main artistic proofs are rhetoric's ethical, emotional, and rational appeals.⁸ *Logos* and *Pathos* in Aristotle's Rhetoric. 361. Thus, the debater's mission is persuading an audience through a logical framing of the message with facts (*logos*), then tapping an argument's emotional aspect (*Pathos*), and presenting his/her apparent moral standing (*ethos*).

Aristotle argued in Floyd-Lapp.⁹ that Rhetoric offers speakers how to build arguments. *Logos*, facts, evidence, and scientific consensus, among others, are notable indicators of persuasion. They are the steps or means of intellectual reasoning which involve the studied-out facts and information presented to maintain the originality in the text or topic being communicated.¹⁰ On the other hand, in *Pathos*, the debater uses anger, mildness and friendship, fear and confidence and admiration as the dominant themes of persuasion. It also evokes the audience's sense of self-respect, common human values and individual responsibilities.¹¹ *Ethos* refers to the proof the communicator uses to establish her character or credibility. It includes an appeal to personality, the ethicality of reasoning, and the originality of content¹². Collectively, these qualities aid in logically framed persuasive arguments.

⁷ Aristotle, "Rhetoric by Aristotle," In the *Works of Aristotle*, translated by W. Rhys Roberts. 2009. <http://classics.mit.edu/Aristotle/rhetoric.html> (Accessed on 09/08/2023).

⁸ Sara, Rubinelli. "Logos and Pathos in Aristotle's Rhetoric. A journey into the role of emotions in rational persuasion in rhetoric". *Journal of International Philosophy*, vol. 286, no. 4 (2018): 361.

⁹ Claire Floyd-Lapp, Aristotle's *Rhetoric: The Power of Words and the Continued Relevance of Persuasion*. Young Historians Conference. Paper 12 (Portland: Portland State University, 2014), 2.

¹⁰ Hem Raj Kafle, "Rhetorical Studies and Its Implications" *Central States Speech Journal*, Kathmandu: Kathmandu University (2010): 3.

¹¹Hem Raj Kafle, *Rhetorical Studies and Its Implications*, 6.

¹² Ibid.

This theoretical framework has been adopted to propel the continuing relevance of Aristotelean rhetoric in perfecting the art of persuasion. As Kafle¹³ highlighted, rhetorical analysis promotes interdisciplinary competence. It has multiple dimensions and constituents, and its practitioners require diverse orientations, such as the knowledge of the political, historical and cultural circumstances of communication, understanding of audience psychology, competence in the judicial selection of modes of appeal, proficiency in appropriate text organisation and selection of diction syntax. This multidisciplinary nature underscores the relevance of AR in the contemporary era of climate debate.

METHOD

Data Base

Data is obtained from three different debates downloaded from the Open Debate Website, accessible at <http://www.opendebate.com>.

We extracted data for study 1 from the debate “Can Humans Adapt to Climate Change?” which was a debate between four debaters; Bjorn Lomborg and Mathew Kahn arguing yes and Michele Wucker and Kehveh Madani arguing no. Bjorn is the author of the Bestsellers "cool it" and The Skeptical Environmentalist" while Mathew is a professor of Economics and spatial sciences at the University of Southern California. On the other hand, Michele is an economic policy expert and founder of Gray Rhino & Company. At the same time, Kaveh is an Environmental scientist and former vice president of the United Nations Environment Assembly Bureau. They are AF1, AF2 and NE1, NE2, respectively.

Additionally, we obtained data for study 2 from the transcript of “Is Carbon Capture Essential to Fighting Climate Change? which was a debate between Katherine Romanak and Mark Z. Jacobson. Katherine is a research scientist at the Bureau of Economic Geology and holds a PhD in Geology from the University of Texas at Austin. At the same time, Mark is a professor at Stanford University. Katherine is arguing yes to the question while Mark is arguing no. They are referred to here as the AF and NE, respectively.

Similarly, data for study 3 is extracted from the debate "Does Your Electric Vehicle Help the Planet?" This is a debate between Britta Gross and Jonathan Lesser. Britta Gross is managing director of the Rocky Mountain Institute's Carbon Free Mobility Global Program.

¹³ Ibid.

On the other hand, Jonathan Lesser is an adjunct fellow at the Manhattan Institute with more than 30 years of experience working for regulated utilities in both public and private sectors. Britta is arguing yes while Jonathan is arguing. They are referred to here as the AF and NE, respectively. These sources of data were purposely selected as they have enough analytical drivers to enable us to understand AR utilisation in modern, complex and multidisciplinary debated topics.

Data Collection

We adopted content analysis in analysing the data, a method of analysis of written, verbal or vision communication messages. Content involves a systematic analysis of the context of the study to identify patterns, themes and other relevant features and draw inferences or conclusions based on the findings. The data source in this study comprised the result of transcription; the data was informed of descriptions or words. The data used to answer the first and second research questions were words, phrases and utterances during the debate sessions. The data is then analysed in a descriptive way of content analysis reflecting the following phases;

(i) Preparation Phrase

Data is collected by observing the debaters and noting the critical aspects, including conditions, themes and reactions during the debate. A recorded video was listened to to understand the debaters' style, use of language and gestures. This enables proper identification of analytical units relevant when analysing and mapping the transcripts.

(ii) Organising phase.

The transcripts were reviewed, mapped and analysed by grouping arguments into different segments; opening, affirmative and negative, rebuttal and mutual question, and closing. Arguments are extracted as raw data, analysed and classified using codes consisting of the debaters' role (affirmative or negative), the debate cycle, and the number of motions. The code is presented as the debater's role/debate cycle/number of motions (AF/MQ/001 or NE/MQ/001 for the Affirmative and Negative, respectively). The selected or coded arguments were analysed using traditional AR techniques and then, through the proposed model, collectively ranked a debate having either strong, moderate or low appeal to Aristotelean rhetoric. It summarises the individual appeal to logos, Pathos and ethos and profiles a debate with a weighted ranking; low, moderate and strong appeal based on the following criteria;

- If less than 50% of arguments appeal to all three Rhetoric, a debate shows a low appeal to AR.

- If only 50% of arguments appeal to all three Rhetoric, a debate shows a moderate appeal to AR.
- If more than 50% of arguments appeal to all three Rhetoric, a debate shows a strong appeal to AR.

These capture the overall degree of utilisation or appeal with its intensity in a given debate or speech. Rooted in rhetoric syllogism, we assumed that not all arguments or claims should appeal to three ARs simultaneously. However, a significant number of arguments within a debate should show an appeal to AR simultaneously. In this sense, appealing to all three AR means that in a scenario with a rhetoric syllogism with major and minor premises and a conclusion, an argument simultaneously appeals to *Logos*, *Pathos* and *Ethos*. This means that a low appeal debate is a debate with less than 50% of the analysed arguments simultaneously appealing to the three rhetoric. In contrast, the moderate appeal is debated, with 50% of claims simultaneously appealing to the three AR. Additionally, strong appeal is a debate with more than 50% of claims appealing to three rhetoric simultaneously.

These can be arrived at using a percentage formula;

Percentage formula = (Value/Total value) × 100

In this case;

$$\frac{\text{Number of appeals to three rhetoric} \times 100}{\text{Total number of Arguments}}$$

(iii) Reporting Phase;

The interpreted data or results are then reported in the result presentation section.

PRESENTATION AND DISCUSSION OF RESULT

Preliminary Remarks

Here we present findings on the study covering AR analysis and a model for determining the degree of appeal to AR. Drawn from the literature, an analytical model rooted in AR is postulated. Data from three debate extracts covering 40 arguments were analysed to test the applicability and relevance of the proposed model using an abstractive approach. We found the model valid in providing a collective insight into the persuasive behaviour per debate, as summarised under the following headings.

Study 1

Here we identified fifty-six (56) different occasions where AR is used by the debaters in framing and delivery of their arguments. The fifteen (15) arguments analysed were framed logically with an impressive record of AR utilisation. The table below summarises the number of each rhetoric employed in the arguments during the debate;

S/N	Arguments	Logos	Pathos	Ethos
1	AF1/OP/001	1	1	2
2	NE1/NE/001	2	2	2
3	AF2/OP/001	3	2	1
4	NE2/OP/001	1	2	2
5	AF1/AF/001	1	0	1
6	NE1/NE/001	1	5	0
7	AF2/MQ/001	1	3	0
8	NE2/MQ/001	1	0	1
9	AF1/MQ/001	1	1	1
10	NE2/MQ/001	2	0	1
11	AF1/MQ/002	1	1	1
12	NE/CL/0001	1	1	1
13	AF1/CL/001	1	1	1
14	AF2/CL/001	1	1	1
15	NE2/CL/002	1	1	1
	Total	19	21	16

Table 1; Number of AR occurrences within arguments

From the table, *logos* were employed in nineteen (19) different places within arguments. *Pathos* was employed in twenty-one (21) places, while *ethos* was employed in sixteen (16) different. This reflects 43.4%, 16.6% and 40% utilisation of *logos*, *Pathos* and *ethos*, respectively. Thus, *Pathos* is found to be the dominant rhetoric among the three rhetoric.

This follows conventional debate practices where *Pathos* is the dominant rhetoric. The table below summarised the percentage of utilisation at the argument level;

S/N	Rhetoric	Number of Occurrence	% of utilisation
1	<i>Logos</i>	19	33.9
2	<i>Pathos</i>	21	37.5
	<i>Ethos</i>	16	28.5
5	Total	56	100

Table 2; Percentage utilisation of AR

From the facts displayed in Table 2, it can be seen that *Pathos* is the dominant rhetorical strategy in the debate, probably because of the nature and impact of the debated topic.

Applying the proposed model, 66.7% of the arguments in the debate appeal to three ARs. This translates to nine (9) out of fifteen (15) arguments simultaneously appealing to the three ARs. Six of these are affirmative arguments, while the remaining three are negative. This placed the debate on strong appeal weighted ranking. The intensity is strong as the percentage of the overall arguments with an appeal to the AR simultaneously is above 50%. Thus, the debate has a strong appeal to AR. This could accelerate seamless audience targeting and persuasion.

Study 2

In this study, we identified thirty (30) different occasions where AR is used by the debaters in the framing and delivery of their arguments. There was a shallow reference to the AR at the argument level. The table below summarised the number of occurrences of rhetoric within each of the arguments analysed;

S/N	Arguments	Logos	Pathos	Ethos
1	AF/AF/001	2	1	3
2	NE/NE/001	2	2	2
3	AF/MQ/001	2	0	0
4	AF/MQ/006	0	0	2
5	NE/MQ/001	1	0	0
6	AF/MQ/002	0	1	0
7	AF/MQ/004	0	0	1
8	NE/MQ/005	0	1	0
9	AF/MQ/005	1	0	1
10	NE/MQ/004	1	0	0
11	NE/MQ/003	0	0	1
12	NE/MQ/006	1	0	1
13	NE/MQ/007	0	0	0
14	AF/CL/001	2	0	1
15	CL/AF/001	1	0	0
	Total	13	5	12

Table 3; number of AR occurrences within arguments

From the table, logos were employed in thirteen (13) different places within arguments. Pathos was employed in five (5) different places, while ethos was employed in twelve (12) places. This reflects 43.4%, 16.6% and 40% utilisation of *logos*, *Pathos* and *ethos*, respectively. Thus, *Logos* is found to be the dominant rhetoric in this debate. This is contrary to the conventional debate analysis, where Pathos is the dominant rhetoric. The table below summarised the percentage of utilisation at the argument level;

S/N	Rhetoric	Number of Occurrence	% of utilisation
1	<i>Logos</i>	13	43.4
2	<i>Pathos</i>	5	16.6
	<i>Ethos</i>	12	40
5	Total	20	100

Table 4; Percentage utilisation of AR

Applying the proposed model, 13.3% of the arguments appeal to three ARs. This translates to only two arguments appealing to the three rhetoric. One of these arguments is an affirmative argument, while the other is a Negative argument. This placed the debate on

low appeal weighed ranking. The intensity is low as the percentage of overall arguments that appeal to the rhetoric simultaneously is less than 50%. Thus, we found the debate to have a low appeal to AR. This could impact audience harvesting and persuasion.

Study 3

Here we identified twenty-three different occasions where AR is used by the debaters in the framing and delivery of their arguments. Again, there was a shallow reference to the AR at the level of the argument. The table below summarises the number of occurrences of each rhetoric employed in the arguments analysed;

S/N	Arguments	Logos	Pathos	Ethos
1	AF/AF/001	1	0	1
2	NE/NE/001	1	0	1
3	AF/MQ/001	1	1	2
4	AF/MQ/002	0	1	0
5	NE/MQ/001	1	0	0
6	AF/MQ/003	2	0	1
7	AF/MQ/004	2	1	2
8	NE/MQ/002	1	0	1
9	AF/MQ/005	1	1	1
10	NE/MQ/003	2	1	1
	Total	9	5	8

Table 5; Applicability of Qualities of Persuasions

From the table above, logos were employed in nine (9) different places within arguments. Pathos was employed in five (5) different places, while ethos was employed in eight (8) places. This reflects 40.9%, 22.7% and 36.3% utilisation of *logos*, *Pathos* and *ethos*, respectively. Thus, Logos is found to be the dominant rhetoric in this debate. This is also contrary to the conventional debate analysis results where Pathos is the dominant rhetoric. It, however, confirmed the finding of the study². The table below summarised the percentage of utilisation at the argument level;

S/N	Rhetoric	Number of Occurrence	% of utilisation
1	<i>Logos</i>	9	40.9
2	<i>Pathos</i>	5	22.7
	<i>Ethos</i>	8	36.3
5	Total	22	100

Table 6; Percentage utilisation of AR

Applying the proposed model, 30% of the arguments appeal to three ARs. This translates to only three arguments appealing to the three rhetoric. Two of these arguments are affirmative arguments, while the other is Negative. This placed the debate on low appeal weighed ranking. The intensity is low as the percentage of overall arguments that appeal to the rhetoric simultaneously is less than 50%. Thus, we found the debate to have a low appeal to AR. This could also impact audience harvesting and persuasion.

DISCUSSION

The findings confirm the applicability and analytical power of the proposed model. Three ranking dimensions, low, moderate and strong appeal, were proven to systematically and comprehensively drive AR analysis. They demonstrated the underlying mechanism of AR in understanding how persuasion is framed in a debate. In addition, the study shows that different dimensions of debate analysis covering appeal to *logos*, *Pathos* and *ethos* could be collectively sieved and ranked to give us additional insight into how AR is used to drive persuasion. The percentage approach for individual appeal enables us to segment claims based on their power of appeal to *logos*, *Pathos*, and *ethos*. However, when collectively weighed and ranked, an analyst could draw a conclusion on the overall appeal and its intensity. This has a dual function. First, it reflects the quality of the analysis on the part of researchers or analysts; second, it shows mastery of persuasion strategy on the side of the debater. Additionally, using the data from the climate debates offers us a broader insight into the continuous relevance of AR in framing arguments within a complex and multidisciplinary era of debate.

In our first study, we extracted and examined ten different arguments from the debate transcript and found only three arguments that appeal to the three rhetoric. This reflected a 30% degree of appeal and ranked low in the AR sensitivity range. Furthermore, in study 2, rhetoric was used in 45 places based on the 15 arguments analysed. Both *logos* and *ethos* were instrumental in the framing claims, thereby revealing the inner AR utilisation

behaviour. Pathos was not instrumental in the framing of the claims. However, study 3 gave us a completely different picture of the utilisation behaviour. 56 rhetoric were used on different occasions and collectively weighted the debate at 66.7% in the range, thereby revealing a strong appeal to AR. In study 2, neither Pathos nor ethos was instrumental in framing the arguments. Arguments strongly emphasise logos and jettisoned the other two rhetoric based on their intensity, placing the debate on the low weighted ranking of 20%. Thus, perfecting persuasion based on the weighted ranking will enable focused and improved argumentation. Three dimensions of the ranking, low, moderate and strong appeal, were proven to systematically and comprehensively drive debate analysis. The model reveals how arguments need to be improved in the ethos way as they lack a strong appeal to ethos. Alternatively, it may reveal that arguments need to be improved in a pathos way because it lacks a strong appeal to Pathos, or it needs to be improved in a logos way because it lacks a strong appeal to logos and so forth. Moreover, the debate as a whole might lack strong appeal to AR; as such, it needs to be improved in a three-dimensional way to capture the brain, heart, and mind of the audience in an Aristotelian fashion.

These reflected the debaters' preferences, choice of words, and conceptual framing in communicating climate science. Indeed, the analysis and model demonstrated that When it comes to a broad multidisciplinary topic like climate change, you get to appeal to three rhetoric; however, if you narrow it down to specific topics like carbon capture and innovation products to reduce emission, there seems to be a narrow appeal to three rhetoric. This is reflected in Study 1 and Study 2. They are specialist areas within climate change science, dealing with issues of innovative products for carbon reduction like electric vehicles. At the same time, study 2 focused on carbon capture and storage technology to reduce carbon emissions. Study 1 focuses on climate change and how we can adapt to it. It is a broader topic with few technicalities. This probably makes framing logical arguments with an appeal to three ARs easier. The study also reveals that multidisciplinary and evidence-based-driven topics need to be cautiously framed when it comes to appeals to three ARs. They are usually specialist areas which make framing with three ARs challenging. Debates within this category usually have low appeal to AR, and such arguments within these topical contexts need to be improved in a three-dimensional way of Aristotelian fashion of persuasion.

Our results lead us to the following recommendation. First, the analysts should always conduct a conventional AR analysis, and then... they should report individual appeals of the rhetoric within a debate and then rank them based debate based on the number of appeals to the three-rhetoric based on our tested model. This will motivate debate analyst to explicate their analysis at a narrow and broader levels, thereby comprehensively

assessing AR utilization. Second, considering that often no appropriate means of determining the degree of appeal and most studies, we recommend that debate analysis be accompanied with this validated model to help understand appeal intensity especially for topics with multidisciplinary or broader and specialist areas.

CONCLUSION

The study covers AR analysis and a model for determining the degree of appeal to AR. Drawn from the literature, an analytical model rooted in AR is postulated. Data from three debate extracts covering 40 arguments were analysed to test the proposed model using an abstractive approach. We concluded that the model is valid in testing the degree of appeal to AR. It addresses the research gap in improving AR analysis in the contemporary period. It also addresses the question of this study by identifying the underlying mechanism that could drive improvement of argumentation and standard of analysis. Specifically, (i) three degrees of appeal, low, moderate and strong, were shown as ranking parameters to understand the overall utilisation behaviour of AR in a debate(ii) the traditional AR analysis was examined, and internal behaviour per argument and debate were examined to provide additional insight into extant AR literature (iii) finally, the model was found to be a strong indicator of the degree of utilisation of AR in a debate.

Our study stands as one of the first attempts in the contemporary period to provide a model that determines the degree of appeal to AR. It explores the utilisation behaviour of debaters concerning AR, which has yet to be previously studied. The study, therefore, contributes to the extant literature by presenting a model that comprehensively determines the debate's degree of appeal to AR. In addition, the results advance the current understanding of the concept of AR in the era of climate debate. Thus, the model of this study can be used by debaters and climate advocates to facilitate and perfect argumentation. The study underscores the importance of the model as key to the continuing relevance and attraction to the rhetorical methods. This is particularly relevant to this era of climate action, where persuasion has the potential to play a critical role in changing people's behaviour.

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RHETORICAL ANALYSIS OF ARGUMENTS MADE IN THE CLIMATE CHANGE
DEBATE: ARGUMENT FAMILIES AND SOCIAL NETWORK LINKS AS
POTENTIAL BASES FOR AGREEMENT

by

Elizabeth L. Malo