




A study on the influence of individual and group dynamics on students' interpretation of *logos* and *pathos*

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ABSTRACT

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Traditional approaches to rhetorical instruction often treat *logos*, *ēthos*, and *pathos* as distinct, independent categories, limiting students' ability to recognize their interconnected nature. In practice, however, persuasive appeals rarely function in isolation; instead, they frequently overlap and reinforce one another in complex ways. Without opportunities to explore these interactions, students' understanding of persuasion risks remaining superficial and fragmented, hindering their ability to analyze and construct nuanced arguments effectively. This study begins by examining the theoretical ambiguities in Aristotle's *Rhetoric* concerning the integration of persuasive appeals, with a particular focus on how modern scholarship has debated whether emotional appeals (*Pathos*) can be embedded within *enthymematic* reasoning. Building on this foundation, the study challenges compartmentalized approaches to rhetorical education by examining how Japanese university students intuitively recognize the interplay between *logos* and *pathos*, particularly in collaborative learning settings. The findings from a classroom-based experiment reveal that students working individually were more likely to categorize and classify statements as either *logos* or *pathos*, whereas those participating in collaborative discussions were significantly more inclined to recognize the coexistence of multiple rhetorical appeals. These results suggest that peer interaction fosters deeper analytical engagement, enhances students' ability to navigate rhetorical complexity, and refines and sharpens their interpretative reasoning—ultimately preparing them for more sophisticated engagement with persuasive discourse in real-world contexts.

Contribution/Originality: This study contributes to the existing literature by empirically examining how students perceive overlapping rhetorical appeals. It is one of the few studies that have investigated the practical benefits of collaborative analysis in rhetorical pedagogy, offering both theoretical insights and pedagogical implications for teaching persuasion in higher education.

1. INTRODUCTION

In its early stages, rhetoric appears to have emerged directly from practical application, with its teachers initially providing a straightforward instructional tool for inexperienced speakers. Over time, however, it evolved into an increasingly complex and autonomous discipline. Aristotle played a foundational role in systematizing rhetoric, offering the most comprehensive treatment of persuasive appeals known as artistic proofs (Greek: *pistis*, plural: *pisteis*).

While rhetorical instruction existed among the pre-Socratics and Socratics¹, particularly among sophistic rhetoricians such as Gorgias, Corax, Thrasymachus, and Protagoras, it was Aristotle's *Rhetoric* that provided the most structured and influential framework. In other words, if rhetorical studies reached their fullest development in the fourth century BCE, it was most substantially through Aristotle's *Rhetoric*. This seminal work, a compilation of lectures delivered over approximately forty years (c. 367–323 BCE)², has been profoundly influential in shaping the conceptualization of persuasive speech. In this treatise, Aristotle (2007), 1.2.1) defines rhetoric as an intellectual process of searching for and discovering *pisteis* or, in essence, inventing them³. As such, *pisteis* form the centerpiece of Aristotelian rhetorical theory, and *Rhetoric* primarily instructs orators on how to construct these persuasive appeals. Unlike non-artistic proofs, which exist independently of the speaker's invention, *pisteis* must be deliberately designed and invented by the orator. Aristotle (2007), 1.2.3) identifies three main artistic proofs, also known as the ethical, emotional, and rational appeals of rhetoric.

Despite the fact that Aristotle developed the concept of *pisteis* in his treatise on rhetoric, ambiguities and inconsistencies remain regarding how these appeals function in cooperation with one another. It is unclear whether Aristotle himself supported their integration or considered them separate (see Aristotle (2007) 1.1.3; 1.2.8; 3.17.8; 3.17.12; 3.17.16–17). The text can be read both ways, and this ambiguity has fueled scholarly debate for decades (see (Braet, 1992; Cope, 1867; Grimaldi, 1972; Lossau, 1981; Meyer, 2005; Sprute, 1982; Süß, 1910)). However, in most contemporary rhetorical education, persuasive appeals are typically taught as discrete and separate categories, which simplifies instruction but risks leaving students with a fragmented and superficial understanding of persuasion.

Although scholars have long debated the theoretical relationship between persuasive appeals, little empirical research has investigated how students themselves perceive this relationship or how collaborative discussion might influence their ability to recognize overlapping appeals. Building on modern interpretations that argue for the possibility of integration, this paper examines this issue within an educational context to determine whether students can instinctively and intuitively recognize the interplay of persuasive appeals. The study specifically focuses on emotional and rational appeals *pathos* and *logos*. The central research question is whether students can intuitively recognize the integration of *logos* and *pathos*, and whether collaborative discussion facilitates this ability. To address this question, the paper first reviews three major interpretive positions on Aristotle in 20th-century scholarship: the traditional, modern, and moderate views. After surveying and classifying these scholarly interpretations, it proceeds to the experimental phase, which involves a classroom-based study with Japanese university students designed to determine their ability to identify instances where *pathos* and *logos* combine and intersect. Understanding this process has important implications for rhetorical pedagogy, as it informs how instructors can design learning environments that foster critical thinking, encourage collaborative reasoning, and promote more sophisticated engagement with persuasive discourse.

2. LOGOS, PATHOS, AND ÊTHOS IN ARISTOTLE'S RHETORIC

Aristotle discusses artistic and non-artistic proofs (Canon of *invention*) comprehensively in Books 1 and 2 of *Rhetoric* and addresses the canons of *style*, *arrangement*, and *delivery* more briefly in Book 3 (see Figure 1). In the second

¹. Ancient sources suggest that Empedocles was the first to promote the study of rhetoric. However, the earliest rhetorical handbooks are attributed to Corax and Tisias, followed by Gorgias, who is reputed to have studied under Empedocles. While no substantial texts by Corax or Tisias have survived, fragments of Empedocles' poetry remain, along with several rhetorical works by Gorgias, including an extended critique of Eleatic philosophy. These accounts suggest that treatises on practical rhetoric were already in circulation and that rhetoric was actively taught, primarily by figures later classified as Sophists, as evidenced in the works of Plato and, earlier, Aristophanes.

². According to G. A. Kennedy (1999) Aristotle's earliest draft of his lectures on rhetoric was likely written around 350 BCE while he was still a member of Plato's Academy. With Plato's encouragement, he probably began offering a public course on rhetoric in the afternoons, partly in response to the teachings of Isocrates.

³. All references to Aristotle's *Rhetoric* are to the second edition of Kennedy's translation and follow the citation method: book, chapter, and section.

chapter of Book 1, he divides persuasive means into “artistic” and “non-artistic” proofs. Non-artistic proofs refer to forms of evidence that are utilized rather than invented by the speaker. These include testimony from free witnesses, evidence extracted from slaves under torture, written contracts, documents, and other forms of direct evidence, which Aristotle examines in detail in the final chapter of Book 1. Artistic proofs, on the other hand, are considered “artistic” because they are created, discovered, or provided by the speaker. These proofs lie at the heart of Aristotle’s rhetorical theory, as he defines rhetoric itself as the process of discovering and inventing means of persuasion.

The artistic means of persuasion are three in number: *ēthos*, *pathos*, and *logos*. This threefold division, as stated before, forms the basis of the first two books of the *Rhetoric*, in which rational arguments as well as *ēthos* and *pathos* receive detailed treatment. *Ēthos* is defined as the speaker’s ability to establish a credible personal character that enhances the persuasiveness of their speech. *Pathos* refers to the speaker’s power to evoke emotions in the audience. *Logos* represents the speaker’s ability to demonstrate truth or an apparent truth through persuasive arguments.

The second book of *Rhetoric* is dedicated to the artistic means of persuasion. In chapters 2–11, Aristotle analyzes a series of emotions; in chapters 12–17, he examines various character types based on factors such as age, class, wealth, and power; and in chapters 19–26, he discusses logical arguments, including paradigms, maxims, enthymemes, topics, fallacies, and refutations. All of these elements are presented pedagogically, with the expectation that their study will equip students with the skills to speak more effectively and develop a deeper understanding of rhetorical dynamics in various situations.

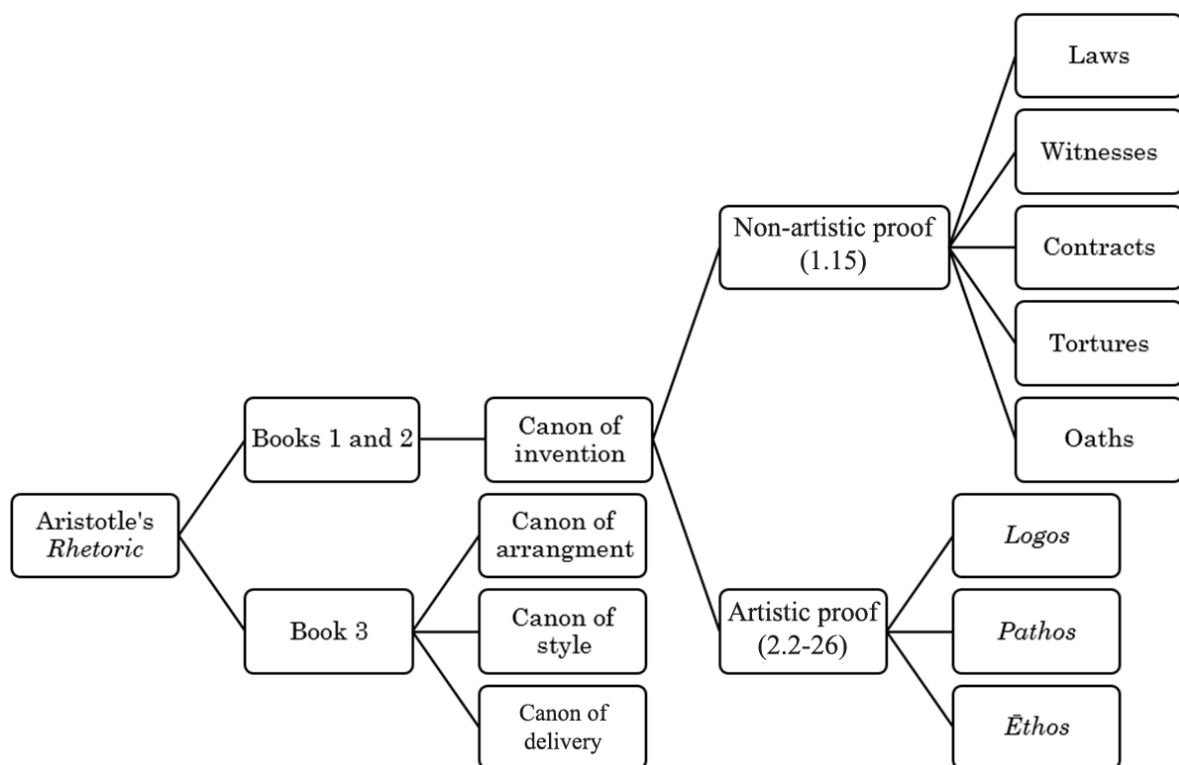


Figure 1. The structure of Aristotle’s *Rhetoric*.

3. THEORETICAL INCONSISTENCIES IN ARISTOTLE’S *RHETORIC*

The sentiment that Aristotle’s *Rhetoric* is both difficult to read and challenging to interpret is shared by nearly all who have engaged with the text. Like other surviving Aristotelian treatises, *Rhetoric* is essentially a collection of lecture notes intended for instruction at his school, written in a highly compressed and nonliterary style. It is likely that during his lectures, Aristotle expanded on the written material, clarified points, answered questions, and facilitated discussions. As a result, *Rhetoric* presents significant interpretative challenges. In particular, the text poses two general difficulties. One arises from an apparent inconsistency between Aristotle’s initial discussion of rhetoric

in the opening chapters and the treatment of the subject that follows, as well as from inconsistencies in his use of some key terms (see Kennedy (1994)). Most of these inconsistencies appear to stem from the fact that *Rhetoric* was written at different times and only partially revised to create a cohesive whole. This idea was first proposed in 1923 by Jaeger (1934) who argued that inconsistencies across several of Aristotle's treatises not just *Rhetoric* could be explained by different layers of composition, reflecting various stages of Aristotle's intellectual development. Jaeger's thesis gained widespread influence, and in 1929, one of his students, Solmsen (1929) applied this approach specifically to *Rhetoric*, identifying three distinct chronological layers within the text.⁴

Recognizing that *Rhetoric*, like most of Aristotle's treatises, was written over different periods, we should not impose an artificial consistency on the text. Aristotle likely never conducted a final revision of the entire work for publication. As a result, words including technical terms are not always used with the same meaning, and material developed in detail in one section is not always fully reconciled with references in other parts. Additionally, Aristotle's school likely attracted a diverse range of audiences, not only young men training to become philosophers but also aspiring politicians and individuals who would need to evaluate speeches in civic or legal contexts. Quintilian (1920), 3.1.14) notes that Aristotle began his lectures on rhetoric in response to Isocrates' successes in the field and delivered them in the afternoon unlike his lectures on metaphysics and ethics, which took place in the morning. This suggests that his lectures on rhetoric were likely intended for a broader audience than those given in the morning (see Wisse (1989)). Consequently, different sections of *Rhetoric* appear to be directed at different types of audiences. The opening of Book 1 seems to address those who had already studied dialectic and were being introduced to rhetoric as a related discipline. Other passages, particularly those containing practical guidelines on speech composition, may reflect the audience of his early public lectures, likely students eager to refine their rhetorical skills (see Kennedy (1999)). This diversity of audiences adds another layer of complexity to *Rhetoric*. The inconsistencies within the text can thus be attributed not only to its composition over different periods but also to the varying audiences Aristotle may have addressed at different times.

One of the major inconsistencies in Aristotle's *Rhetoric* is the varying degree of emphasis on the enthymeme and the paradigm as the basis of proof, as well as their relationship to ethical and emotional modes of persuasion (*ēthos* and *pathos*). In other words, there is no clear consistency in Aristotle's treatment of artistic proofs, making *Rhetoric* more complex than it initially appears. This issue, which is the central focus of this paper, will be examined in depth in the following sections. As will be discussed, a consensus is lacking regarding the relationship between the enthymeme and the ethical and emotional modes of persuasion, and this lack of agreement has given rise to fundamentally different approaches to interpreting Aristotle's *Rhetoric*.

4. THE AMBIGUOUS RELATIONSHIP BETWEEN *PATHOS* AND *LOGOS*

By the time Aristotle began giving lectures on rhetoric, emotional appeals were likely already viewed as a form of manipulation (see Plato (2005), 261a–b). This may explain why Aristotle (2007), 1.1.3) begins *Rhetoric* by criticizing earlier handbook writers for their focus on *pathos*, arguing that they placed too much emphasis on emotional influence while neglecting other key aspects of persuasion, particularly the enthymeme. He explicitly condemns attempts to sway judges through emotions, asserting that it is improper to “wrap the jury by leading them into anger or envy or pity” (2007, 1.1.5). Aristotle (2007) considers such appeals mere accessories rather than fundamental components of rhetorical proof. At least in the first chapter of *Rhetoric*, he appears to define rhetoric as a process of guiding an audience toward a particular recognition, stance, or course of action primarily through the construction and deployment of enthymemes. In this framework, enthymemes constitute the essence and core of effective persuasion,

⁴. Determining the exact dates of composition for different parts of Aristotle's *Rhetoric* is likely impossible. According to Wisse (1989) while Solmsen's analysis has been influential, it has also been met with criticism, even from scholars who accept the idea that Aristotle's work developed over time. Consequently, several alternative theories have been proposed about the different stages in which *Rhetoric* was written and revised.

while all else including *pathos* is, as Aristotle states, “accessory to enthymeming” (2007, 1.1.3). This suggests that, at least in this chapter, Aristotle does not regard *pathos* as an essential component of rhetorical art, which presents an apparent contradiction with his concept of the three artistic proofs. In other words, Aristotle’s strong opposition to persuasion achieved through emotional manipulation, as well as his critique of earlier rhetorical theories, stands in tension with his extensive treatment of *pathos* in Book 2. There, he elevates *pathos* to the same level as *logos* and *ēthos* as a fundamental means of persuasion and devotes a significant portion of the book to specific emotions, dedicating individual chapters to anger, friendliness, fear, shame, kindness, pity, indignation, envy, emulation, and their opposites. The contradiction is evident and likely stems from the fact that *Rhetoric* underwent multiple revisions as Aristotle developed or changed his views. Additionally, the work lacks a final revision, which explains the gaps and inconsistencies. Thus, what Aristotle says about *pathos* in 1.1.3 may reflect an earlier stage of his thought (see (Barwick, 1922; Solmsen, 1929; Wisse, 1989) before he had fully developed his rhetorical theory.

It is clear that the rejection of *pathos* in the first chapter of *Rhetoric* cannot be reconciled with its later recognition as an essential persuasive appeal, on par with rational arguments, in the rest of the work. However, scholars have attempted to explain this apparent contradiction in various ways. For instance, Braet (1992) argues that Aristotle explicitly states in 2.1.2 that *ēthos* and *pathos* must be treated equally with *logos* because the object of rhetoric is judgment. According to Braet, Aristotle’s philosophy holds that judgment does not occur on rational grounds alone. Instead, choices are determined not only by reason but also by evoking the emotions of the decision-maker. Consequently, a speaker addressing a judge cannot rely solely on logical argumentation, even in an ideal setting with a rational judge. Similarly, Corbett and Connors (1999) observe that while Aristotle may have wished for rhetoric to rely exclusively on rational appeals, he was pragmatic enough to recognize that individuals are often persuaded by their emotions, and he never denies that *pathos* is successful in practice. If rhetoric is, as Aristotle defines it, “the art of discovering all the available means of persuasion,” then, as Corbett and Connors argue, he had to include an examination of emotional appeals in his rhetorical theory. Other scholars, such as Grimaldi (1980) and Solmsen (1938) argue that Aristotle does not reject *pathos* completely but instead criticizes earlier handbook writers for failing to examine how *pathos* interacts with *logos*, particularly in relation to the enthymeme. According to this view, Aristotle saw the emotions discussed in Book 2 not as independent rhetorical devices but as resources for enthymematic premises and means by which to create logical arguments. In other words, Aristotle approves of using emotion to shape an audience’s attitudes, but only when it is integrated and used in conjunction with *logos*. Despite these scholarly attempts to justify Aristotle’s inclusion of *pathos* among the means of persuasion, the fact remains that the first chapter of *Rhetoric* explicitly rejects emotional appeals as unfair and irrelevant. Efforts to reconcile this rejection with his later recognition of *pathos* as a legitimate rhetorical tool find no support at least within the text of the first chapter⁵.

5. ENTHYMEME AND ITS ROLE IN THE INTERPLAY BETWEEN *LOGOS*, *ĒTHOS*, AND *PATHOS*

Aristotle (2007, 1.2.8) argues that *logos* functions through two specific forms of reasoning: the enthymeme and the paradigm. In rhetorical discourse, deduction takes the form of the enthymeme a rhetorical syllogism while induction takes the form of the paradigm, or rhetorical example. In other words, rather than relying on formal logical deduction and induction as seen in dialectic, rhetoric employs modified versions of these processes enthymemes and

⁵. Another inconsistency related to *pathos* appears in the six short chapters (12–17) of Book 2, which examine the characteristics of different age groups—the young, the old, and those in the prime of life—as well as various social groups, including the high-born, the wealthy, and the powerful. These chapters focus on the nature of individuals and the emotions that influence each group. However, their precise function remains unclear, as it is uncertain whether they pertain to *pathos* or *ēthos*, and nothing in the preceding sections of Book 2 suggests that this discussion will follow. Consequently, scholars have long been divided on how these chapters should be interpreted (see (Barwick, 1922; Kennedy, 1999; Wisse, 1989)).

paradigms which Aristotle examines extensively in Books 1 and 2 of *Rhetoric*⁶. These means of argumentation are arguably the most revolutionary features of Aristotle's rhetorical theory. Enthymemes, in particular, occupy a central place within his rhetorical system, as Aristotle (2007), 1.1.4, refers to them as the "body of persuasion," underscoring their foundational importance in effective rhetorical practice. Enthymemes, in particular, occupy a central place within his rhetorical system, as Aristotle (2007) 1.1.4 refers to them as the "body of persuasion," underscoring their foundational importance in effective rhetorical practice (see (Burnyeat, 1994; Conley, 1984; Copeland, 2019, 2021; Rapp, 2002; Sprute, 1975, 1981, 1982; Woerther, 2007)).

Indeed, the enthymeme is so integral to his conception of rhetoric that the *Rhetoric* itself appears largely centered on formal and informal logical argumentation, thereby positioning *logos* as a distinct and elevated mode of persuasion one that, in some respects, even surpasses persuasion based on *ēthos* or *pathos*. Aristotle (2007), 1.1.3, criticizes earlier handbook writers for neglecting this fundamental aspect of persuasion, arguing that they instead focused on emotional appeal and wordplay. He repeatedly asserts that the logical dimension of rhetoric especially the enthymeme remains underdeveloped in previous rhetorical theories, despite being its most essential element.

Enthymemes function by deriving specific conclusions from general affirmative or negative statements⁷. However, as Aristotle (2007) 1.2.13; 2.22.3) notes, enthymemes as they appear in actual rhetorical practice are rarely expressed in their full logical form. Instead, speakers often omit one or more premises that are so widely accepted by the audience that stating them explicitly would be redundant. This results in a compressed form of reasoning based on implied knowledge and shared assumptions a hallmark of rhetorical deduction⁸. In some cases, even the conclusion may be stated alone, particularly when the speaker can rely on the audience's familiarity with the underlying logic or shared values that support it.

The premises of enthymemes are typically derived from *endoxa* that is, widely accepted opinions, social norms, or commonly held beliefs. For this reason, Aristotle (2007), 1.2.13) emphasizes the importance of understanding *endoxa* in rhetorical practice, since they often serve as the foundation for enthymematic reasoning. These premises, however, are not purely logical in nature and can also carry ethical and emotional weight. This opens the possibility that both *ēthos* and *pathos* may be incorporated into the propositional structure of enthymemes, thereby blurring the boundaries between distinct rhetorical appeals. In other words, when emotionally or ethically charged premises are combined with other claims, they contribute directly to the formation and construction of an enthymeme. This suggests that persuasive appeals rooted in character and emotion can be embedded within the logical structure of an argument. The key question, however, is whether Aristotle himself explicitly endorsed this integration. This has been one of the central scholarly debates surrounding Aristotle's rhetorical theory: Can the enthymeme incorporate *ēthos* and *pathos*, or does it remain strictly within the domain of *logos*?

⁶. *Paradigms* can serve as premises for *enthymemes* when they help establish a general truth that the audience is expected to accept. In such cases, a speaker presents specific *paradigms* to justify a broader claim, which then forms the basis of an *enthymeme*. This illustrates how *paradigms* contribute to rhetorical argumentation. Aristotle (2007) also considers *paradigms* a form of testimony for *enthymemes* and emphasizes their complementary role in persuasion. In 2.25.8, he identifies *paradigms* as a type of premise upon which *enthymemes* are built. Accordingly, some scholars argue that, for Aristotle, the *paradigm* constitutes a special case of the *enthymeme*. See Kennedy (1999); Sprute (1982) and Wisse (1989) who regard *paradigms* as a subtype of the *enthymeme*.

⁷. Enthymemes often appear as compound sentences, where clauses are joined by coordinating conjunctions such as "for" or "so" or linked logically by conjunctive adverbs like "therefore," "hence," or "consequently." They may also take the form of complex sentences, with clauses connected by subordinating conjunctions such as "since" or "because".

⁸. According to Kennedy (1999) "omission of one premise can have the psychological effect of pleasing listeners by appealing to their intelligence and can help to bring listeners into identification with the speaker". Furthermore, one could argue that orators often suppress one of the premises in an argument, as audiences may be impatient with or unable to follow the kind of closely reasoned, full-scale argument associated with formal logic.

6. APPROACHES TO THE INTEGRATION OF THE ENTHYMEME WITH *ĒTHOS* AND *PATHOS*

6.1. The Traditional View

One influential strand of rhetorical scholarship maintains a strict separation between logical reasoning and appeals to character or emotion. This corpus of scholarship, often referred to as the *traditional view*, holds that *logos* remains separate from *ēthos* and *pathos* and that the enthymeme is confined to logical reasoning and purely rational argumentation. According to this interpretation, *ēthos* and *pathos* function independently of enthymematic reasoning, either through direct statements that are not part of the argument or indirectly through style and delivery (see (Cope, 1867; Sprute, 1982). Advocates of this view base their interpretation on several key points. First, they contend that an enthymeme is, by definition, a logical argument. Second, they note that in the opening chapter of *Rhetoric* (2007, 1.1.3), Aristotle explicitly prioritizes logical proof, suggesting that the enthymeme serves no other function than rational demonstration. Furthermore, in Chapter 2, he closely associates rational proof with the enthymeme, identifying the ability to use *logos* with the ability to construct enthymemes: “And all [speakers] produce logical persuasion by means of *paradigms* or enthymemes and by nothing other than these” (2007, 1.2.8). This passage suggests that, for Aristotle, the only true art of rhetoric is primarily concerned with the rational demonstration of an issue. Accordingly, the proof proper to rhetorical discourse is exclusively logical and is identified with the enthymeme, which Aristotle calls “the body of persuasion”. All other forms of proof, such as appeals to emotion or character, are considered indirect and merely supplementary. This may explain why Cope (1877) concludes that, for Aristotle, *logos* is theoretically the only true and proper method of persuasion.

Another key argument put forth by proponents of the traditional interpretation is Aristotle (2007), 3.17.8) explicit warning in Book 3 against combining the enthymeme with *pathos* or *ēthos*.

And when you would create *pathos*, do not speak enthymemes; for the enthymeme either “knocks out” the *pathos* or is spoken in vain. (Simultaneous movements knock out each other and either fade away or make each other weak.) Nor should you seek an enthymeme when the speech is being “ethical”; for logical demonstration has neither *ēthos* nor moral purpose.

Here, Aristotle explicitly rejects the use of enthymemes when the primary goal is to stir emotions or establish moral credibility. He suggests that logic and emotion function separately, and that enthymemes are ineffective tools for emotional or ethical persuasion. Despite the fact that this instruction appears only in this passage of the *Rhetoric*, it has, alongside the other arguments previously discussed, led scholars of the traditional exegesis (Cope, 1867; Lossau, 1981; Sprute, 1982; Süß, 1910; Van Eemeren & Grootendorst, 1987) to reject the possibility of an enthymematic expression of *ēthos* and *pathos*. These scholars argue that *ēthos* and *pathos* are objectionable and non-argumentative means of persuasion that operate outside the boundaries of logical reasoning and have nothing to do with the enthymeme. In this view, only *logos* is properly enthymematic and genuinely argumentative.

6.2. The Modern Interpretation

An alternative perspective, often referred to as the *modern view* or *modern interpretation*, claims that all three artistic proofs *logos*, *ēthos*, and *pathos* can take the form of enthymemes. According to this view, Aristotle’s treatment of ethical and emotional proof is generally ambiguous and characteristically obscure, which leaves room for the interpretation that *ēthos* and *pathos* can also take an enthymematic form (see Lunsford and Ede (1984)). In this view, scholars such as Grimaldi (1972); Wisse (1989); Braet (1992) and Meyer (2005) challenge the traditional exegesis represented by Cope (1867); Süß (1910); Lossau (1981) and Sprute (1982) who advocate for the mutual exclusivity of the three appeals in argumentation.

Proponents of the modern interpretation argue that although Aristotle explicitly states that rational arguments take the form of the enthymeme and does not make a parallel claim regarding *ēthos* and *pathos*, this omission does not necessarily imply their exclusion. Nowhere does Aristotle assert that *ēthos* and *pathos* cannot take enthymematic form.

Indeed, no passage in the *Rhetoric* definitively settles whether the discursive form of these appeals is that of an enthymeme or a narrative. In some passages particularly in Book 3 Aristotle even appears to imply a connection between enthymeme and *ēthos*. “If one has logical arguments, one should speak both ethically and logically (2007, 3.17.12); “In regard to *ēthos*...sometimes it is advisable to change enthymemes into maxims” (2007, 3.17.16-17). Moreover, while Aristotle clearly associates *logos* with the enthymeme, he never throughout the entirety of the *Rhetoric* substitutes *logos* for enthymeme or uses the two terms interchangeably. This suggests that, although the two are closely connected, they are not identical. Consequently, no decisive indication is given that defines the discursive form of *ēthos* and *pathos* that is, whether they take the structure of an enthymeme. In Aristotle’s *Rhetoric*, the discursive form assumed by *ēthos* and *pathos* thus remains an open question.

Among the scholars who endorse this interpretation, Braet (1992); Conley (1982) and Grimaldi (1972) are especially notable in arguing that all three artistic proofs are expressed through the enthymematic form. Grimaldi (1980) in particular maintains that all persuasive appeals are enthymemes, and that the three modes of proof operate as simultaneous dimensions of the enthymeme, dynamically interconnected and functioning as inseparable strands in rhetorical persuasion. In this framework, the persuasive appeals are not only viewed as material to be incorporated into the structure of the enthymeme, but are also seen as inherently enthymematic (see Grimaldi (1972)). Accordingly, Grimaldi (1980) argues that Aristotle conceives the enthymeme as “something more than an act of reason” (1980) as a vehicle capable of carrying affective force. From this perspective, the *Rhetoric* should be interpreted in a way that allows *ēthos*, *pathos*, and *logos* to be formulated through enthymematic reasoning, with the enthymeme ideally uniting all three elements. In Grimaldi’s view, the three modes of proof are not discrete or independent rhetorical components, but intrinsically integrated elements of argumentation. Emotional and ethical appeals are not positioned as alternatives to rational appeal, but rather as strategic dimensions within argumentation, capable of being conveyed through and embedded in the enthymeme itself.

6.3. The Moderate View

Another strand within the non-traditional exegesis presents a more moderate interpretation, exemplified by scholars such as Braet (1992) and Wisse (1989) who argue that *ēthos* and *pathos* may be conveyed through enthymemes, but also through other rhetorical means. In other words, these scholars adopt an intermediary position between the traditional and non-traditional views. From this perspective, enthymemes may support *ēthos* and *pathos*, yet these appeals can also be expressed through non-enthymematic forms. Proponents of this view thus maintain that the artistic proofs are capable of functioning independently, but may also combine naturally within rhetorical discourse. They further contend that this is Aristotle’s position as well, and that he adopts a flexible and neutral stance on the forms *ēthos* and *pathos* may assume (see (Fortenbaugh, 1975; Wisse, 1989))⁹. According to this interpretation, Aristotle allows for *ēthos* and *pathos* to be expressed both with and without enthymemes.

7. EXAMINING THE INTERPLAY OF *PATHOS* AND *LOGOS*

As previously discussed, some scholars within the modern interpretive tradition such as Solmsen (1938) and Grimaldi (1972) go so far as to argue that Aristotle never intended to separate *pathos* from *logos*. In fact, several scholars view Aristotle’s treatment of *pathos* in Book 2 not as a distinct or independent rhetorical appeal, but as a resource for constructing emotionally charged premises that can be incorporated into enthymematic reasoning (see (Braet, 1992; Conley, 1982; Green, 2006; Grimaldi, 1972)). From this perspective, the emotions discussed in Book 2 serve as potential *topoi* for argumentation, offering rhetoricians a repertoire of emotional cues that can be embedded within logical structures to reinforce persuasive impact. This integrated view invites reconsideration of how *logos* and

⁹. According to Wisse (1989) only in four of the fifteen emotions treated in Book 2, Aristotle’s instructions suggest a combination of *enthymeme* and *pathos*, while in other instances he appears to suggest that emotions may be expressed through different, non-enthymematic means.

pathos function together in real-world persuasive discourse. If *pathos* can, in fact, be embedded within the logical structure of an argument as a premise shaped by shared emotional or moral assumptions then Aristotle's *Rhetoric* offers a more holistic model of persuasion than is often acknowledged. This paper seeks to explore whether such integration is intuitively recognizable to students, even in the absence of explicit instruction. The following experimental study investigates whether Japanese university students, when asked to classify rhetorical statements as either *logos* or *pathos*, can identify the interplay between the two. In what follows, this central thesis is examined through a classroom-based study that compares individual versus group-based interpretations of rhetorical statements.

8. INTRODUCTION TO THE EXPERIMENT

8.1. Past and Present Pedagogical Approaches to Teaching Persuasive Appeals

The examination of students' intuitive ability to recognize the overlap of persuasive appeals, and the use of collaborative group work as a determining factor, represents a novel direction that has not been undertaken prior to this study. Although a number of studies have examined students' use of rhetorical appeals in communication, none to date has empirically investigated whether students perceive their integration, particularly in collaborative classroom settings. In fact, in many university courses across disciplines, the rhetorical concepts of *logos*, *ēthos*, and *pathos* are still taught as entirely separate and independent entities, with little or no reference to their potential interaction. This compartmentalized approach is common in both academic discussions and pedagogical materials, and numerous studies have focused on their discrete incorporation into written or verbal communication.

Holmes-Henderson, in her work on the reception of Aristotle's *Rhetoric* in British school classrooms (2020–2025), shows that *logos*, *ēthos*, and *pathos* are being reintroduced not only as classical concepts but also as practical tools for self-expression, critical analysis, and citizenship. Yet, even in this renewed context, the possibility of their integration receives no explicit attention. A similar pattern is evident in higher education elsewhere. For example, Kacimi and Messekher (2024) in their research on how Algerian English majors employ Aristotle's rhetorical appeals in argumentative essays make no reference to the potential integration of appeals or evidence that students used them in combination. Likewise, Khairuddin, Rahmat, Noor, and Khairuddin (2021) in their study of rhetorical appeals in Malaysian university students' argumentative writing highlight students' neglect of *ēthos* as writers but make no mention of whether students combined appeals or conceived of their potential interconnection. Other comparable studies also treat the appeals as separate entities (see (Demirdöğen, 2010; Higgins & Walker, 2012; Kennedy & Menten, 2010; McLaughlin, 2005; O'Quinn, 2009)). While distinctions among appeals may simplify instruction, they ultimately misrepresent their dynamic and interconnected nature. When treated in isolation as distinct categories, students may struggle to recognize how appeals operate together in real-world persuasive discourse. This study challenges such compartmentalized approaches by investigating whether students can perceive the interplay between *logos* and *pathos* in both individual and group settings, even in the absence of explicit instruction that such integration is possible. In doing so, it seeks to assess students' intuitive understanding of rhetorical complexity and the extent to which collaborative analysis can enhance their interpretive insight. Rather than directly teaching integration, the experiment examines whether students instinctively classify rhetorical statements as purely logical (*logos*) or emotional (*pathos*), or whether they are able to recognize the overlap between the two.

8.2. Experiment Design

The experiment was conducted in two phases within a single 90-minute class session and took place across six classrooms over the course of two semesters, with a total of 148 students participating. In the first phase (60 minutes), students were introduced to the historical and theoretical foundations of *logos* and *pathos*. The two rhetorical appeals were presented as distinct and independent concepts, with no mention of their possible overlap or integration. Students were also shown various examples illustrating how *logos* and *pathos* are commonly employed in different

forms of communication.

Once students had developed a foundational understanding of the two appeals, they proceeded to the second phase of the experiment (30 minutes). During this phase, participants were given a test consisting of 10 rhetorical statements and were asked to classify each one as either *logos* or *pathos*. Unbeknownst to them, all ten statements had been deliberately constructed to include elements of both appeals, thereby creating a potential for ambiguity and overlap. The experiment was structured as follows:

- In three classrooms (Classes A, B, and C) during the fall semester of 2023, students worked individually, analyzing and categorizing the statements on their own ($n = 72$).
- In the other three classrooms (Classes D, E, and F) during the fall semester of 2024, students worked in groups of four, discussing and reaching a collective decision on the classification of each statement ($n = 76$ students, $n = 19$ groups).

By comparing the individual and group responses, the study aimed to determine whether collaborative discussion influenced students' ability to recognize the interplay between *logos* and *pathos*.

8.3. Participants and Setting

To investigate how students interpret *logos* and *pathos*, a classroom-based experiment was conducted in two phases with students from six different classes at three private higher education institutions in Japan: Waseda University, Aoyama Gakuin University, and Seikei University. The participating classes were labeled A through F: Classes A and D were conducted at Waseda University, Classes B and E were held at Aoyama Gakuin University, and Classes C and F were drawn from Seikei University.

The first phase of the experiment took place during the fall semester of 2023, and the second phase during the fall semester of 2024. Prior to completing the ten-statement test, participants received a 60-minute pretest lecture introducing Aristotle's concepts of *logos* and *pathos*. This lecture provided foundational knowledge of these rhetorical appeals, ensuring that all students began the experiment with a shared baseline understanding. Following the lecture, students were given a ten-statement test, in which they were asked to classify each statement as either *logos* or *pathos*. The test was designed to assess and evaluate students' interpretations of persuasive appeals and to determine whether they could recognize that both *logos* and *pathos* were simultaneously present in each statement. A total of 72 students participated in the first phase, while 76 students participated in the second. In the second phase, participants were organized into 19 groups. Each class had an approximate enrollment of 25 undergraduate students, all of whom were enrolled in one of three courses: Critical Thinking, Academic Writing, or Rhetorical Theory. These courses were semester-long (approximately 14 weeks) and met weekly for 90 to 100 minutes. The study was conducted in the natural classroom setting, with all enrolled students participating as part of their regular coursework. Although the courses differed in focus, and one class included non-English majors, all three emphasized the development of critical and analytical thinking skills.

All participants were native Japanese speakers with advanced English proficiency, ranging from CEFR C1 to C2. Their high level of fluency enabled them to articulate ideas clearly in both spoken and written English. Additionally, none of the participants had prior exposure to the course content or previous familiarity with Aristotle's three modes of persuasion.

8.4. Research Instrument

To assess the effect of group dynamics on students' interpretation of *logos* and *pathos*, a test was developed and administered in both phases of the experiment. The test consisted of 10 statements, each deliberately constructed to incorporate elements of both logical and emotional appeals. These statements were designed to blur the boundaries between *logos* and *pathos*, allowing the study to examine whether participants would detect the rhetorical interplay between the two. For instance, consider the following statement: "It's a matter of common sense that people deserve

to be treated equally. The Constitution calls it ‘self-evident.’ Why, then, was I denied a seat because of my disability?” This statement effectively blends *logos* and *pathos* to create a persuasive argument. From a *logos* perspective, it follows an enthymeme that relies on a commonly accepted premise. The implied logical structure is as follows: (1) All people deserve to be treated equally. (2) The Constitution recognizes this principle as “self-evident.” (3) Therefore, denying the speaker a seat because of their disability contradicts this fundamental truth. By appealing to common sense and constitutional principles, the argument establishes a rational basis for fairness and justice. At the same time, the statement evokes *pathos* by appealing to the audience’s sense of injustice and empathy. The phrase “Why, then, was I denied a seat because of my disability?” introduces personal hardship and suffering, triggering emotions such as sympathy, frustration, and moral indignation toward discriminatory treatment. By highlighting the individual consequences of inequality, the argument seeks to generate an emotional response that reinforces its logical claims. In this way, the statement intertwines *logos* and *pathos*, appealing simultaneously to reason and emotion to maximize its persuasive effect. The test included 10 such statements, each designed with similar dual appeal. These statements are presented in Table 1¹⁰:

Table 1. Statements incorporating both *Logos* and *Pathos* used in the experiment.

* Each of the following statements uses rhetorical appeals to persuade the audience. Carefully analyze each statement and determine whether it appeals to <i>logos</i> (Logic and reasoning) or <i>pathos</i> (Emotion).	Logos	Pathos
1. It’s a matter of common sense that people deserve to be treated equally. The Constitution calls it ‘self-evident.’ Why, then, was I denied a seat because of my disability?	<input type="checkbox"/>	<input type="checkbox"/>
2. A single act of kindness has the power to change a life, yet we often walk past those in need without even acknowledging their existence.	<input type="checkbox"/>	<input type="checkbox"/>
3. Smoking around children exposes them to harmful chemicals, which can cause coughing, difficulty breathing, and even life-threatening asthma attacks. Young children are especially vulnerable because their developing lungs are more sensitive to toxic substances in cigarette smoke.	<input type="checkbox"/>	<input type="checkbox"/>
4. Peace of mind is invaluable, and nothing ensures it more than a reliable security system. Our advanced technology is designed to protect your family, reducing the risk of intrusion and allowing you to rest without worry.	<input type="checkbox"/>	<input type="checkbox"/>
5. A moment of distraction behind the wheel can cost a lifetime of regret. Responsible driving isn’t just a choice it’s a duty to protect yourself and those around you.	<input type="checkbox"/>	<input type="checkbox"/>
6. The elderly have spent their lives building our communities, yet too many spend their final years alone and forgotten. A society that neglects its elders fails in its duty to honor those who came before us.	<input type="checkbox"/>	<input type="checkbox"/>
7. To address the pressing challenges of the 21st century terrorism, nuclear proliferation, poverty, genocide, climate change, and disease we must build strong international partnerships. By working together, we can create a safer, more just world while upholding our shared values of peace, freedom, and progress.	<input type="checkbox"/>	<input type="checkbox"/>
8. The strength of a democracy is measured not by the voices it silences but by the voices it empowers. A government that restricts free speech weakens its own legitimacy and undermines the very freedoms it was established to defend.	<input type="checkbox"/>	<input type="checkbox"/>
9. For just fifty cents a day, a child can gain access to clean drinking water, protecting them from life-threatening diseases and improving their quality of life.	<input type="checkbox"/>	<input type="checkbox"/>
10. Imagine watching your child suffer from a disease that could have been prevented with a simple vaccine. No parent should have to live with that kind of regret.	<input type="checkbox"/>	<input type="checkbox"/>

To evaluate students’ interpretations, participants were given only two response options for each statement: *logos* or *pathos*. This restriction was intentional. The aim was to assess whether students would instinctively try to classify the statements as involving both appeals even though no such option was explicitly provided thereby revealing their intuitive understanding of rhetorical complexity.

¹⁰. The statements were constructed by the author but were closely modeled on real-world rhetorical discourse—such as political speeches, advertising language, and social commentary—and were designed to reflect the types of persuasive appeals students commonly encounter in media and everyday communication.

8.5. Data Collection and Analysis

This study analyzed student responses to evaluate whether participants instinctively recognized that *logos* and *pathos* can function together within persuasive discourse. In addition, the study examined whether collaborative discussion in group settings would enhance students' ability to detect the rhetorical interplay between these two appeals.

8.5.1. Findings from the First Phase of the Experiment (Individual Responses)

The first phase of the experiment, conducted with 72 individual participants, revealed that the majority of students classified each statement as appealing to either *logos* or *pathos*, rather than recognizing a combination of both. Only 8 out of 72 participants (11.11%) identified two to four statements as containing elements of both rhetorical appeals. This suggests that 88.9% of participants adhered to a binary categorization, indicating a strong inclination to view logical and emotional appeals as distinct and mutually exclusive. In addition, students in this phase completed the test relatively quickly, with most finishing within approximately 10 to 15 minutes. This limited time frame suggests that, when working independently, participants engaged in a more immediate and less reflective decision-making process. The absence of peer discussion or exposure to alternative interpretations may have restricted their ability to detect rhetorical complexity, reinforcing a simplified understanding of *logos* and *pathos* as separate categories. The tables and figure present the detailed results from the first phase of the experiment: Table 2 presents the number of students who classified two to four statements as both *logos* and *pathos*.

Table 2. Students who classified two to four statements as both *Logos* and *Pathos*.

Fall semester of 2023	Total students	Number of students identified both <i>Logos</i> and <i>Pathos</i> in a Question	Percentage of students identified both <i>Logos</i> and <i>Pathos</i> in a question	Correct answers per class / Total questions
Class A	25	2	8.00%	8 / 250
Class B	23	4	17.39%	19 / 230
Class C	24	2	8.33%	4 / 240
Total	72	8	11.11%	31 / 720

Table 3 presents the total number of correct responses for each statement in classes A, B, and C.

Table 3. Total number of correct responses for each statement in classes A, B, and C.

Fall semester of 2023	Questions	Number of students identified both <i>Logos</i> and <i>Pathos</i> in a Question	Total students	Percentage of students identified both <i>Logos</i> and <i>Pathos</i> in a question
1	Question 1	2	72	2.78%
2	Question 2	1	72	1.39%
3	Question 3	3	72	4.17%
4	Question 4	8	72	11.11%
5	Question 5	4	72	5.56%
6	Question 6	0	72	0.00%
7	Question 7	1	72	1.39%
8	Question 8	2	72	2.78%
9	Question 9	4	72	5.56%
10	Question 10	6	72	8.33%

Figure 2 illustrates the percentage of correct responses for each statement in classes A, B, and C.

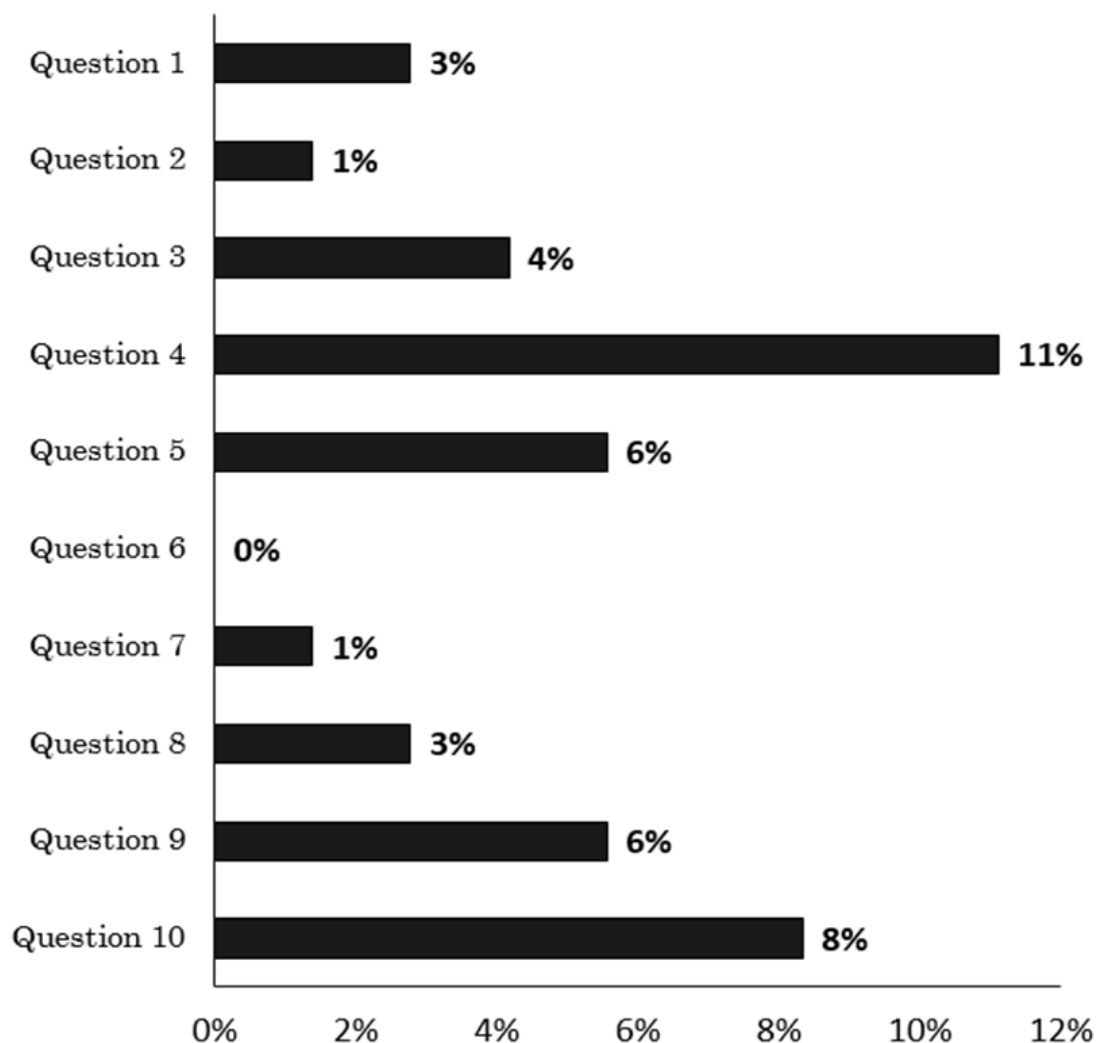


Figure 2. Percentage of correct responses for each statement in classes A, B, and C.

8.5.2. Findings from the Second Phase of the Experiment (Group Responses)

A notable shift was observed in the second phase of the experiment, during which participants worked in groups of four to analyze and classify the rhetorical statements. In this phase, 12 out of 19 groups (63.2%) identified two to four statements as containing elements of both *logos* and *pathos*. This represents a significant increase compared to the first phase and suggests that group discussion enhanced students' ability to recognize the multifaceted and overlapping nature of rhetorical appeals. The group setting encouraged participants to engage in collaborative analysis, allowing them to consider multiple perspectives before arriving at a decision. Without receiving explicit instruction regarding the integration of rhetorical appeals, students were nonetheless able to identify rhetorical overlap through discussion and peer reasoning. This points to the interpretive value of dialogue in fostering rhetorical awareness. Moreover, working in groups led to longer test completion times, with most participants taking approximately 30 minutes to finalize their responses. This extended engagement suggests that group discussions prompted deeper analytical reflection. Participants were required to articulate their reasoning, justify their interpretations, and deliberate over potential classifications before reaching consensus factors that likely contributed to their increased recognition of dual rhetorical appeals. The tables and figure present the results from the second phase of the experiment: Table 4 presents the groups that classified two to four statements as both *Logos* and *Pathos*. Table 5 presents the total number of correct responses for each statement in classes D, E, and F.

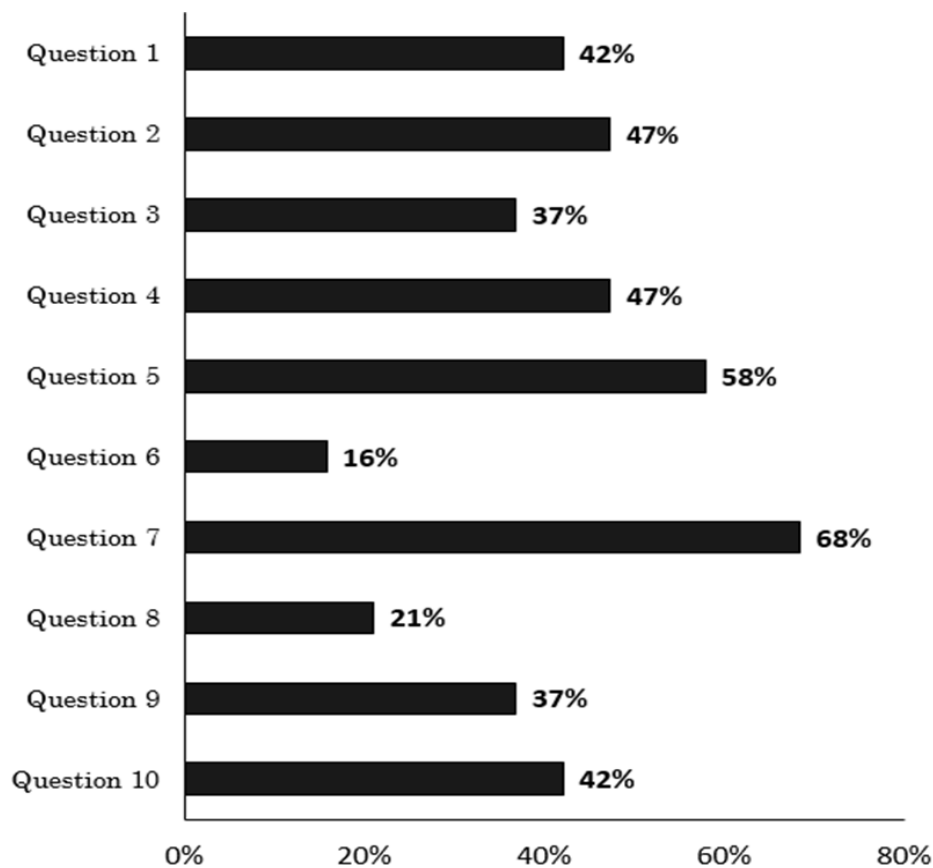
Table 4. Groups that classified two to four statements as both *Logos* and *Pathos*.

Fall semester of 2024	Total groups	Number of groups that classified two to four statements as both <i>Logos</i> and <i>Pathos</i>	Percentage of groups classified two to four statements as both <i>Logos</i> and <i>Pathos</i>	Correct answers per class / Total questions
Class D	6	3	50.00%	20 / 60
Class E	6	4	66.67%	27 / 60
Class F	7	5	71.43%	32 / 70
Total	19	12	63.16%	79 / 190

Table 5. Total number of correct responses for each statement in classes D, E, and F.

Fall semester of 2024	Questions	Number of groups identified both <i>Logos</i> and <i>Pathos</i> in a Question	Total groups	Percentage of Groups identified both <i>Logos</i> and <i>Pathos</i> in a question
1	Question 1	8	19	42.11%
2	Question 2	9	19	47.37%
3	Question 3	7	19	36.84%
4	Question 4	9	19	47.37%
5	Question 5	11	19	57.89%
6	Question 6	3	19	15.79%
7	Question 7	13	19	68.42%
8	Question 8	4	19	21.05%
9	Question 9	7	19	36.84%
10	Question 10	8	19	42.11%

Figure 3 illustrates the percentage of correct responses for each statement in classes D, E, and F.

**Figure 3.** Percentage of correct responses for each statement in classes D, E, and F.

8.5.3. The Role of Group Dynamics in Rhetorical Interpretation

The findings indicate that group interaction encourages a more nuanced understanding of persuasion, as students were more inclined to move beyond simplistic classifications and acknowledge the complexity of rhetorical appeals. This seems to stem from the interactive nature of group discussion, which prompted participants to explain their reasoning, consider different viewpoints, and negotiate their interpretations together. Through this process, students broadened their analytical perspectives and became more aware that the test statements couldn't be categorized under a single rhetorical appeal.

Furthermore, the study found that students working in groups were more likely to take interpretive risks and engage in deeper, more reflective analysis. In contrast to individual participants, who largely adhered to a binary, single-choice approach and completed the test more quickly, group participants showed a greater tendency to recognize the coexistence of *logos* and *pathos* within the same statement. What makes this particularly compelling is that it occurred in the absence of explicit instruction or a dual-choice option, suggesting that the collaborative setting itself facilitated a broader, more flexible approach to interpretation.

These results underscore the pedagogical value of collaborative learning in rhetorical education, especially when the goal is to develop students' ability to analyze persuasive language with greater depth and interpretive sophistication. The Figure 4 shows the percentage of correct classifications of two to four statements as containing both *logos* and *pathos*, comparing individual (Classes A–C) and group (Classes D–F) responses.

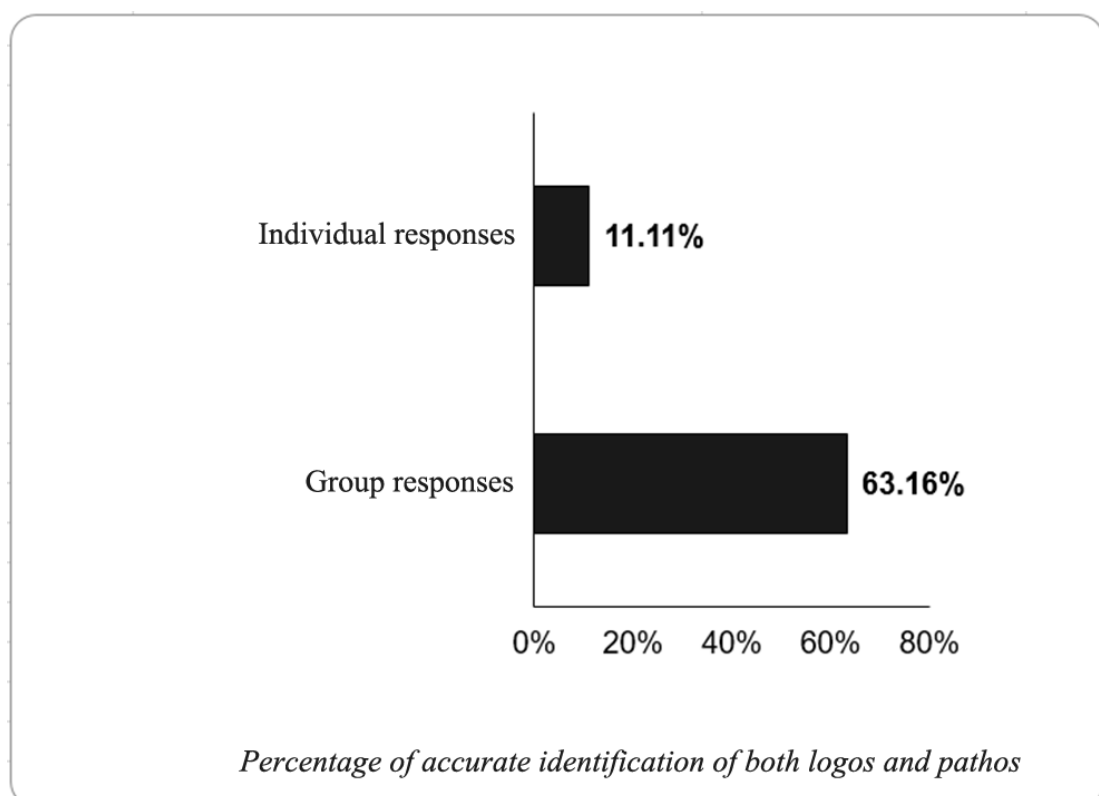


Figure 4. Percentage of correct classifications of two to four statements as both *Logos* and *Pathos* in individual (Classes A–C) and group (Classes D–F) responses.

9. DISCUSSION

This study contributes to the growing body of research on rhetorical education, particularly by investigating whether students can instinctively recognize the integration of rhetorical appeals and how individual versus group dynamics influence their interpretation. The findings, grounded in empirical evidence, carry significant pedagogical and practical implications and offer valuable insights into how students engage with persuasion instinctively and how collaborative learning environments shape interpretative reasoning. The fact that students without prior knowledge

of theoretical debates on the integration of rhetorical appeals in modern scholarship were able to identify their interplay, especially in group contexts, has important pedagogical significance.

Drawing on contemporary interpretations of Aristotle's *Rhetoric*, this study argues that teaching rhetorical appeals as separate and isolated categories may limit students' understanding of persuasive discourse. The findings further suggest that students, even in the absence of direct and explicit instruction, are capable of recognizing the integration of persuasive appeals when working collaboratively. This suggests that fostering collaborative analysis in rhetorical education encourages students to approach persuasion from multiple perspectives and improves their interpretive ability, enabling a more nuanced understanding of how *logos*, *pathos*, and *ēthos* interact in real-world communication. Such evidence supports the case for a more integrated and dialogic approach to teaching rhetoric one that emphasizes the dynamic interplay between rhetorical appeals and leverages collaborative discussion as a tool for deeper engagement. The findings thus offer practical guidance for educators in designing activities and curricula that reflect the interconnected nature of rhetorical appeals and promote collaborative learning as a means of rhetorical discovery.

While the study presents meaningful insights, caution is necessary in generalizing the results due to limitations in sample size, scope, and cultural context. Although the data demonstrate that students working in groups were significantly more likely to recognize overlapping rhetorical appeals indicating an increased awareness of rhetorical complexity these findings may have been influenced by cultural norms specific to Japanese society. Japanese culture places high value on social harmony, particularly in group and organizational settings. The cultural emphasis on maintaining cohesion, avoiding direct disagreement, and seeking consensus can influence group behavior and decision-making processes. As Fusé (1982) notes, individuals in Japan often adjust their personal views to align with the group consensus, prioritizing group solidarity over individual assertion. This cultural dynamic may have shaped how students engaged in group discussion, potentially encouraging more inclusive responses, even if not all group members perceived dual rhetorical elements. Given this possibility, future research should explore how cultural background influences rhetorical interpretation in collaborative settings. Comparative studies across different cultural contexts could help determine whether the observed benefits of group discussion hold universally or are context-dependent.

In addition, future studies should expand the scope of inquiry by incorporating larger and more diverse participant samples, as well as a broader range of test materials. Including rhetorical examples that exclusively reflect only one rhetorical appeal, such as *logos* or *pathos*, would allow for a more precise assessment of interpretive accuracy and provide further insight into students' ability to detect integration. Future research should also systematically integrate *ēthos* into the experimental design to offer a fuller understanding of how students interpret the interaction among all three Aristotelian appeals in persuasive discourse.

10. CONCLUSION AND IMPLICATIONS

Across various disciplines and educational settings, rhetorical appeals are still often taught as distinct and separate categories, with limited attention given to their potential integration (see (Demirdöğen, 2010; Higgins & Walker, 2012; Kacimi & Messekher, 2024; Kennedy & Menten, 2010; Khairuddin et al., 2021; McLaughlin, 2005; Quintilian, 1920)). While this traditional approach may offer analytical clarity, it often fails to capture the nuanced interplay of *ēthos*, *pathos*, and *logos* as they function in real-world persuasive discourse. This study, grounded in modern interpretations of Aristotle's *Rhetoric*, which emphasize a more fluid and interconnected understanding of persuasive appeals, challenges compartmentalized models of rhetorical instruction. It argues that treating appeals in isolation limits students' understanding of rhetorical complexity, while relying on collaborative, experience-based instruction can foster students' intuitive recognition of the integration of rhetorical strategies, even without explicit theoretical instruction.

The classroom-based experiment conducted in this study offers a more holistic and practice-oriented approach

to rhetorical education. It demonstrates the pedagogical value of incorporating collaborative analysis alongside, or even in place of, traditional direct instruction. The findings suggest that collaborative discussion enhances students' intuitive capacity to identify and interpret the simultaneous operation of multiple rhetorical appeals within persuasive discourse. Through peer interaction, students demonstrated an intuitive ability to detect the coexistence of logical reasoning and emotional persuasion, which underscores the critical role of collaboration in promoting interpretive depth and analytical reasoning. Recognizing the value of this intuitive, socially mediated interpretive capacity is essential for rhetorical pedagogy, particularly in learning environments where students must analyze and navigate complex persuasive strategies. Drawing on the insights of this study, educators can design curricula and learning activities that reflect the integrated nature of persuasive appeals and promote collaborative learning as a core instructional method. By doing so, rhetorical instruction can move beyond rigid categorization, equipping students with a more sophisticated, flexible, and transferable understanding of persuasion.

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Institutional Review Board Statement: The study involved minimal risk and followed ethical guidelines for social science fieldwork. Formal approval from an Institutional Review Board was not required under the policies of School of Law, Waseda University, Japan. Informed verbal consent was obtained from all participants, and all data were anonymized to protect participant confidentiality.

Transparency: The author states that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

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