

A ludological perspective on the shape of argument: Collaborative assent to dissenting opposition

MICHAEL A. YONG-SET

Argumentation Studies PhD, University of Windsor, Canada

yongset@uwindsor.ca

This paper attempts to extend Yong-Set's ludological approach to give a better philosophical articulation of the nebulous tension found in the activity of argumentation. By harnessing the resources of ludology – the academic and critical study of games *qua* games – we can use the framework of 'player-opposition shapes' to help understand the appropriate forms of opposition an antagonist's dissent should take to accomplish the collaborative goals embraced when assenting to participate in various types of argumentation.

KEYWORDS: games, ludology, opposition, collaboration, players, dialogue types

1. INTRODUCTION

There is an intuitive but difficult to articulate tension in the activity of argumentation: in some nebulous way, opposing, disagreeing with, or interfering with the proponent of an argument is not only helpful but necessary. This paper attempts to articulate and address this tension through the cross-application of ludological approaches to argumentation. I argue that we can improve our understanding of argumentation by harnessing the insights of *ludology* – the academic and critical study of games *qua* games, especially in terms of player experience, systems design and the socio-cultural dynamics of gaming. Whether games share a familial relation with argumentation or whether games are merely analogous to argument, it remains the case that we can enrich our understanding of argument by better understanding games.

When analyzed through a ludological lens, it is apparent that all games necessarily contain a minimal degree of both 'collaboration' and 'opposition.' Even the most co-operative or solitary games contain opposition and even the most adversarial games contain collaboration in some minimal degree. But it is the particular arrangement and degree of these elements that differentiates various types of games from one

another. It is useful to differentiate literal games in terms of how the players relate to the other elements of the game system – whether they stand in relations of opposition or collaboration. These ‘player-opposition shapes’ provide a framework by which an analyst can give preliminary form to the otherwise nebulous phenomenon of ‘gameplay.’ Analogously, I argue that taking a ludological perspective can give shape to the otherwise nebulous activity of argumentation.

2. ON THE CONCEPT OF GAMES

The Wittgenstein of the *Philosophical Investigations* is suggestive of an interesting but mysterious notion: if one can see how games work, one can see how natural language works. This sentiment eventually developed into a perspective that has come to be known as the ‘language-game’ theory of language. There are a variety of interesting challenges in taking up the language-game theory of language – most of which are beyond the scope of this paper to address but that I suspect can be well met. One of the most significant difficulties of that theory is as follows: one can look upon games and nevertheless fail to understand how games work, or how the workings of games relate to language use. This confusion is sometimes compounded when Wittgenstein makes exhortations such as:

Don’t say: “[all games] *must* have something in common, or they would not be called ‘games’” – but *look and see* whether there is anything common to all. – For if you look at them, you won’t see something that is common to *all*, but similarities, affinities, and a whole series of them at that. To repeat: don’t think, but look! (Wittgenstein, 1953, S.66).

It is understandable that some may find this advice unhelpful – one may have looked upon children playing games or reflected on one’s own experience in partaking in activities said to be ‘games’ and still been unable to see what Wittgenstein is getting at. *Prima facie*, we are expressly being told not to think about the issue – rather, we should understand the nature of games simply by looking. On the worst of interpretations, it might sound as though games were fundamentally ‘non-cognitive’ and therefore incompatible with any reflective, philosophical or theoretical activity – such as producing analyses of language use or argumentation.

There is a simple way to dissolve this confusion. It will not be *a priori* thinking – thinking that is prior to or independent from experience – that will reveal the nature of games. Rather, we must go out into the world of real, occurring practices to gather evidence and experiences – we must look at, engage in and study various instances of

activities we already believe to be 'games.' And from this collection of empirical experience, we may then begin thinking about, reflecting upon, and constructing frameworks that can help us characterize the matrix of affinities, similarities and features that tend to unite the many activities into one family of 'games.' There should be no problem in principle in attempting to use an understanding of games to enhance our understanding of argument.

Of course, I will not pretend that the notion of using games to further our understanding of argument is new. Many other authors have similarly had the idea that we can better understand one thing – arguments – in terms of the other – games. There is *prima facie* plausibility that the two activities of gaming and arguing share enough relevant functional similarities such that some have even gone as far as suggesting that we reform the very way in which we conceive of 'argument' along the lines of a game, such as tennis or chess (Cohen, 1995; Lakoff and Johnson, 1980; Ritchie, 2003). Ralph Johnson and Tony Blair – two of the seminal figures in the informal logic and natural language argumentation movement – remark, "an argument understood as *product* [...] cannot be properly understood except against the background *process* which produced it [...] the appropriate analogy is a move in a chess game or a play in a football game" (Johnson & Blair, 1987, p. 45, emphasis in original). The prolific Douglas Walton and Erik Krabbe make the game comparison as well: "at this level, types of dialogue coincide with particular dialectical systems or dialogue games" (Walton & Krabbe, 1995, p. 67). Addressing the question of whether argument is related metaphorically, literally or analogously to games is not a question I seek to address in this paper. Rather, the simple point I would like to make is that many argumentation theorists have discerned a *prima facie* plausibility in mixing 'games' into our analyses of argumentation.

As one of the more well-known and well-developed 'game-infused' accounts of argument, Walton and Krabbe's theory of dialogue types warrants some further examination. Their suggestion is that what differentiates persuasion from negotiation, inquiry from quarrel and so on can be discerned by observing the differences that obtain among four axes of 'structural features' (1995). Roughly stated, dialogue types are differentiated based on: 1) the initial situation that prompts the engagement; 2) the main goal of the dialogue; 3) the participants' primary aims; 4) the side benefits that can be accrued by engaging in the dialogue. Their dialectical account of reasoning portends to include interpersonal elements as part of the analysis – this marked a significant shift away from prior accounts of argument that focused exclusively on timeless, impersonal claim-reason complexes. The ever-evolving Waltonian theory of dialogue types has much to recommend it; I believe

there is something very right-minded about differentiation along structural lines. Yet, I will argue that there is something incomplete – something close-yet-so-still-far – in their account of the types of ‘dialogue games.’

Walton and Krabbe write that the “structure of a dialogue can be thought of as a dialogue game, in the sense that participants take turns making moves, and that they have goals and strategies” (Walton & Krabbe, 1995, p. 67). Of course, as with all analogies, the comparison is necessarily partial and less than full identity. Their phrasing “in the sense” presumably delimits the scope of the analogy. They contend that *only* in these ways is a dialogue like a game; accordingly, it is only in the sense of turn-taking and goal-oriented strategy that games share relevant functional similarities to dialogues. As with all arguments from analogy, there are critical questions one would be well-served to ask when using a known concept to extend our knowledge of a less-known concept. Perhaps most important among the questions: do we, in fact, have a good understanding of the first analogue? If we were to misunderstand games, would we misunderstand argument?

I submit that ‘turn-taking’ and ‘goal-oriented strategy’ does not begin to exhaust the relevant functional similarities between game and argument. This is neither the boundary nor the limit of what we might fruitfully gain from attempting to use games to better understand argument. My point of departure from the others who have variously attempted positing game-infused accounts of argument is this: prior attempts to do so have largely operated with either an impoverished or overly-reductive concept of ‘game.’ This unnecessarily limited view of games thus produces an unnecessarily limited view of argument. Walton and Krabbe appear to have this sort of concept in mind, as they remark that “ultimately, the rules may define a “game” in the sense of mathematical game theory” (1995, p. 70).

If one were not interested in trusting an extemporaneous, anecdotal understanding of games, one might presume that the well-established and boldly named ‘game theory’ might be a reasonable source of guidance into what sort of thing a game is. But this presumption should be revoked on further examination. Roughly stated, ‘game theory’ is a theory of strategic decision-making, especially in terms of economic and mathematical models that originates in part from rational choice theories of action. Its conceptual resources are largely geared towards qualifying and quantifying a given situation; this is so one can calculate which decision most optimally satisfies one’s interests in that moment. Game theory primarily attempts to answer the question: “what is the best choice to make right now?”

Game theory is normative in this way: it presumes that there is a best – or perhaps a ‘least worst’ – choice in any situation; and that

individuals should always want to be finding and taking it. In other words, players of this 'game' of strategic choosing are supposed to be 'rational choice actors' who should be and always are seeking to maximize their interests. This approach also skirts into the realm of the idealized insofar as it involves theoretical modelling of abstracted and optimal decision-making. But unless one were to think that 'playing a game' reduces down or is fully analyzed into an idealized series of strategic decisions, 'game theory' – despite its name – actually tells us very, very little about real 'games' or its players. Game theory is not entirely useless in understanding games – but it is only useful for dealing with a very narrow slice of the broad family of concepts that are relevant to playing, understanding and designing actual games.

Standing in contrast to the narrow, reductive resources of game theory, we are better-served to consider the broad explanatory power and descriptive richness of *ludology* – the academic and critical study of games *qua* games, especially in terms of player experience, systems design and the socio-cultural dynamic of gaming. Ludology is a multi-disciplinary theory of games richly understood. Among other things, it is a discipline that seeks to understand how fun things are fun so that we can better appreciate- and purposefully create fun experiences. It is the ludologists – not the game theorists – who have taken up Wittgenstein's exhortation to "look!" at real games played by real players in real life and only then try to understand the complex network of elements, interactions, affinities and structures that allows games to successfully function as games. I argue that if we were to use this ludology-enriched understanding of games, our understanding of argument will be enriched. The first step, of course, will be trying to grasp what sort of thing a 'game' is.

3. A LUDOLOGICAL PERSPECTIVE

The following definition of 'game' was adapted from Fullerton et al. (2008) and enhanced with a few philosophical considerations of my own making. However, a few disclaimers are in order: 1) in the field of ludology, the definition of 'game' is roughly as settled as 'argument' is in argumentation theory; 2) the following is expressly and explicitly *not* intended to be a set of necessary or jointly-sufficient conditions. There will necessarily be interesting, marginal edge cases. This is unproblematic since the goal of this definition is not to create a rigorous, universal sorting metric; the goal is to say something helpfully insightful about a large family of activities. From a ludological perspective, a game is:

A first-order system of interacting, formal elements (including rules, objects, players, and goals) that gives rise to a second-order, emergent, possibility-space that situates the player(s) in a structured conflict in which they resolve uncertainty in unequal outcomes.

Elsewhere (Yong-Set, 2016), I have gone into greater detail about this definition of 'game' and its myriad of interesting components. For our purposes here, however, I will be focusing on unpacking and extending the aspect of 'structured conflict' to think in new ways about argument.

To make this case, I will import two ludological concepts. First is the 'lusory attitude.' Bernard Suits remarks that:

There has to be an explanation of that curious state of affairs wherein one adopts rules which require one to employ worse rather than better means for reaching an end [Suits, 1978, p. 38].

Stated briefly and succinctly, the lusory attitude is characterized by a player's willing adoption of constraints and inefficiencies for the sake of accomplishing some goal. Consider the example of golf for an illustration. In this game, the task goal is to get a small white ball into a small hole far in the distance. However, if this were the goal, why would one ever agree to follow a set of rules that prevents the use of hands to do so? The rules require that one eschews perhaps the most expedient method – using one's hands – and instead one must hit the ball with a stick to launch it through the air or over the ground. Why would anyone willingly desire to do things in this inexpedient, inefficient – and some might say – 'irrational' way?

The short answer is that, in a game, players willingly subject themselves to limitations and constraints that make things harder to do precisely because there is a certain kind of meaning, significance and joy in doing things the 'hard way' and not in some other way. When we choose to play together with others, all the players enthusiastically agree to be bound by these same rules of 'meaningful inefficiency.' This peculiar collaborative assent among players is the lusory attitude. Consonant with audience-centric, rhetorical approaches to argumentation, one can adopt a 'player-centric approach to game-design' (Fullerton et. al, 2008). On this view, 'players' are integral, formal elements of an interactive system that must also be understood to understand the emergent phenomena of gameplay.

The second ludology-inspired concept needed is what I will refer to as the 'degrees of opposition.' I take 'opposition' in its broadest of senses; something counts as 'opposition' if it makes it harder rather than easier to accomplish one's goal in some way. Opposition runs

opposite to one's intentions. Opposition can take many forms and come in different degrees. I distinguish between three degrees of opposition under the following stipulated headings: 1) conflict; 2) competition; and 3) confrontation.

The lowest degree of opposition I call 'conflict.' Using golf again as an illustrative example: 1) the player is 'in conflict' with the rules of the system. The stipulation that none can use their hands on the ball certainly makes it harder to accomplish the goal. These procedural rules – those that govern what counts as a move, how one transitions to different phases of gameplay, or how players are to resolve the outcome of interactions – all count as a form of resistance, friction, or constraint on the player. They conflict with or oppose the main goal in a minimal, but important sense. 2) Up one degree is 'competition' – when there is not enough to go around, scarcity frustrates the achievement of one's goals as well. This is the same sense of 'competition' we deploy when speaking of animals in the wild 'competing' over resources. Of course, animals – like players – can compete for a limited and scarce supply of resources without ever directly interacting with or fighting one another. Competition – even when indirect – is still a form of constraint that runs opposite to one's intentions. 3) The highest degree of opposition is 'confrontation.' In highly adversarial contexts – such as in a boxing ring or a criminal court room – one might encounter opposition in the form of another player's direct efforts to impede one's plans. In a confrontation, one player can take actions that directly interfere with the progress and aims of other players. One can manually and purposefully frustrate the other player's ambitions.

Bringing together the lusory attitude and degrees of opposition illuminates an interesting second-order character of games: all games fundamentally have a minimal degree of both collaboration and opposition. Even the most solitary or co-operative games with no adversarial players have a degree of opposition – there is minimally a system of rules and constraints that make achieving goals harder. Even the most adversarial, zero-sum games have a degree of collaboration – even if only in the mutual agreement to be the kind of opposition that the other players want, need and expect to make the victory meaningful. In games, players willingly agree to being opposed in some but not all ways. The results produced by a game system are meaningful only because they came about through an interactive process shaped by constraining, structured procedures that were willingly embraced by the participants. How a lack of explicit assent by tacit participants figures into the quality of a game's results is an important topic for another occasion.

4. THE SHAPE OF ARGUMENT

I submit that this ludological insight can nicely illuminate the murky intuition many have in regards to the apparent tension between challenging others' views and helping them in the process of argumentation. By leveraging ludology's resources, we can sketch a framework for analyzing 'game-types' in terms of the different shapes that the 'player-opposition' relation can take. In turn, I suggest that we can deploy a similar analysis to different argument-types. To demonstrate what this framework looks like, I will be using golf to illustrate three different game-shapes. In this analysis, there are three main types of elements: Player; System; and Environment, represented by P, S and E respectively.

The main opposition of golf is a conflict between the player and a combination of the rules and environment. This would be represented as: $P \text{ v } (S+E)$. As golf is a single-player game, it is straightforward how P is deployed here. However, it should be well-noted that it is not possible to bracket out 'the players' and their real attributes when analyzing games; there is no such thing as a game without players. The System, S, refers to the set of form-giving rules that define what legal procedures are and what constitutes an 'item' or status in the game among other things – in this case, what counts as a 'stroke,' what is a penalty, how one resolves penalties, what an 'albatross' is, what a 'round' is, how victory is determined, and so on. The Environment, E, of golf includes the course on which it is played, the wind, rain, sand and crocodiles that can hinder one's ambitions of getting that ball in that hole. Of course, some elements of the environment can also assist in achieving the goal – but I would argue that they are primarily oppositional. One may also argue that perhaps a digital crowd, a viewing audience or a heckling gallery might also count as an environmental element that can make things harder or easier. Nevertheless, the *primary* shape of the player-opposition relation that characterizes golf is: $P \text{ v } (S+E)$.

Those familiar with golf who watch it on TV may remark that there are many people playing golf at the same time – the leaderboards have dozens of players participating in the tournament against one another. So in what way is golf a single-player game? Simply put, golf is a game of many shapes. Many games can be played in a variety of different 'modes' while nevertheless still being 'the same game' for some intents and purposes. Of course, what differentiates the different game modes is, among other things, the differences among the player-opposition shapes. In tournaments or standard group play, the players are engaged in the second degree of opposition – they are participating in an indirect competition. In this form of the game, the primary player-opposition shape would be: $(\text{Player 1 v } S+E) \text{ v } (\text{Player 2 v } S+E)$. Not only

are the players each in a parallel conflict with the system and environment to get the ball in the hole they are *also* competing against other players by trying to get their ball in the hole in the fewest strokes possible. Since only one player can have the status of ‘having taken the fewest strokes,’ there is a relevant scarcity in what the players need to obtain the win condition.

It is less well known as a format, but there are also a few game modes for ‘team golf.’ The Ryder Cup – a biennial televised competition between North American and European teams of professional golfers – is among the better-known instances of this. For the most part, the competition involves a series of individual (Player 1 v S+E) v (Player 2 v S+E) matches between members of the opposing teams; and the final outcome of the Cup is determined based on which team wins more of those matches. However, some of the matches take place in a ‘foursome’ format. In this case, two players from each team join forces against two players from the other team. The team players take turns and alternate striking their team’s ball, and they can consult and talk with one another during the game. This is an instance of a game with a primary opposition-shape of: $[P1 \text{ v } (S+E)] + [P2 \text{ v } (S+E)] \text{ v } \{[P3 \text{ v } (S+E)] + [P4 \text{ v } (S+E)]\}$. Interestingly, foursome team golf is at once a single player conflict, a team-based collaboration, and an indirect competition. Arguably, with the right players and the right kinds of beverages, team golf can also become directly confrontational as well. In the above example, there are many elements that stand in a variety of relations to one another. Some are oppositional while others are collaborative. Similar to identifying the main operator in logical sentences, so too is it sometimes important to identify the main form of opposition in games. This short exposition canvassed only three possible player-opposition shapes; but these are in no way exhaustive or representative of the myriad of possible and fascinating player-opposition shapes one can design into games.

With some sense of how this analysis works for seeing features of literal game, I now turn to so-called ‘argument-games.’ In the Wittgensteinian spirit, if we can see how games work, we will see something about how arguments work as well. As previously stated, I concur with Walton and Krabbe in believing that it is fruitful to differentiate between types of dialogue – or types of ‘argument-games’ – by their structural and form-giving features. However, the details of my burgeoning framework of structural differentiation are guided by the integration of thick concepts taken from ludology rather than the thin concepts of game theory. To show the plausibility of this framework, I shall recast Walton’s dialogue types in this new light. This is laid out in Table 1 below:

Argument Type	Primary Game/ System Goal	Primary Shape of Player-Opposition
Inquiry	Discover 'truth' based on cumulative proof	$(P+P) \vee S$
Negotiation	Reach mutually advantageous agreement	$P +/\vee P$
(Rational) Persuasion	Instill / change belief in someone's mind	$(P+S) \vee (P+S)$
Quarrel	Vent emotions, inflict damage	$P \vee P$

Table 1 – Player-opposition shapes in goal-oriented argument

Inquiry can be construed as a co-operative game in which players work together to overcome an opposing system of constraints – namely, the standards of good inference and epistemic adequacy that hinder reaching just any conclusion – a $(P+P) \vee S$ game. The products of inquiry are meaningful candidates for being 'knowledge' precisely *because* they have presumably overcome certain forms of systematic opposition that are designed to exclude outcomes that do not reach certain standards of reliability, acceptability or epistemic warrant. A negotiation is a peculiar 'co-oppositional' game of imperfect information in which the roles and relations are fluid and fluctuate between helping and harming the other's goals – a $(P \vee/+ S)$ game.

Rational persuasion is a special kind of Player verses Player game in which the system of good inference rules acts as a perspicuous ally to both sides – $[(P+S) \vee (P+S)]$. If both participants are committed to playing this game and not some other, then both are willing to embrace the constraints placed upon them by the rules of good reasoning and epistemic conduct. This enables the possibility of one party making a 'legitimate' and binding move on the other's commitments. By specifying the range of acceptable argumentative moves and effectively codifying them into a rule-bounded system of inadmissible conduct and admissible procedures, the process of argumentation is crafted in such a way that we would deem its products meaningful and 'rationally persuasive.' Of course, an argument – like a game:

is not everywhere bounded by rules; but no more are there any rules for how high one may throw the ball in tennis, or how hard, yet tennis is a game for all that, and has rules too (Wittgenstein, 1953, S.68).

By contrast, the quarrel has no central role for inference-centred systemic constraints; it is a Player vs. Player (PvP) game in which the main goal is different from persuasion. It would not be fully accurate to say that 'anything goes' in a quarrel – but when compared to rational persuasion, far less is ruled procedurally inadmissible or inappropriate in crafting the process. In games, as in argument, players willingly agree to being opposed in limited but not fully-specified ways. What ways those should be depends on the goal of the argument-game mode.

There are two remarks that warrant mentioning. Firstly, above I canvass only four types of argument in Table 1. But I do not mean to suggest that these are exhaustive of all types of arguments nor that there are tidy and discrete boundary lines between these categories of analysis in practice. Walton identifies more types of dialogues than I have argument-types. These four categories likely account for a large portion of real-life argumentative dialogues, but this does not mean that all arguments fit into one of these four categories or that argumentation theorists should not be interested in those other forms. Secondly, at this preliminary phase of construction, I have not yet decided how or whether to represent the argumentation counterpart of E in this analysis. Perhaps E could be the distantly-engaged, indirectly-interacting, non-player-character audience; for example – a public speech or a newspaper editorial might be an example of a (P v E) argument-game. Alternatively, E could be the network of socio-economic forces and the dynamics of power relations that suffuse the social milieu in which real-arguments are invariably situated. Perhaps the E might stand for the shared cognitive environment of the sort expounded by Tindale (1999); it could be a backdrop of shared commitments, histories and beliefs that at times lends assistance to one's aims while at others constitutes a status quo to be overcome. It almost seems to go without saying that these 'environmental pressures' are always operating in the background; so like a common term in math, it may divide out of the analysis without issue. But surely this is not correct for we have obtained plentiful evidence that reminds us that even when things go out of sight and out of mind, they do not always go out of effect.

5. CONCLUSION

I have argued that there is good reason to believe that our understanding of argument can be enhanced through an understanding of games. However, previous attempts at exploring this approach have been limited by an impoverished understanding of 'games.' By exchanging thin, reductive and extemporaneous concepts of 'game' with a thick, multi-faceted and enriched concept of 'game' developed by

ludologists, the true potential of such an approach will be better realized. One product of a ludological approach to argument is a conceptual framework that can help us analyze the structure of the opposition-collaboration relation among the participants and the other elements of the system. This in turn can help us better understand the appropriate forms of opposition an antagonist's dissent should take to accomplish the different kinds of goals embraced by arguers when they collaboratively assent to participate in different types of argument-games.

There are many ways to characterize, describe and analyze arguments – some of which are more useful for some purposes than others. Gilbert suggests that heuristic dialogues – such as inquiry – are about finding and making discoveries (2014, p. 40). Whether the dialogue is geared towards discovering propositions worthy of being called 'knowledge' or uncovering previously unknown motives and passions that support deeply held positions, heuristic dialogues involve finding out new information and new thoughts to think. Walton similarly notes that there are eristic dialogues – such as quarrels – in which the primary motif is navigating interpersonal strife or vanquishing an opposing interlocutor's reputation (1995, p. 78). At times, one could be forgiven for inferring that 'heuristic' and 'eristic' are two opposing ends of a spectrum that characterize the degree of adversariality in argumentative dialogue types. However, I would suggest as a final thought that, like 'opposition' and 'collaboration,' the relationship between 'strife' and 'discovery' may not be so simple. In games as in argument, the relationship may be more complex than diametric opposition or mutual-exclusion – and that relationship may come in a diversity of forms and shapes we would be well-served to explore.

When we argue, we collaboratively assent to be opposed by the rules and persons that make our results meaningful. If we keep this in mind, then perhaps we can better understand how we can help others by being the kind of dissenting opposition they need.

ACKNOWLEDGEMENTS: University of Windsor and CRRAR for much aid.

REFERENCES

- Cohen, D. H. (1995). Argument is war . . . and war is hell: Philosophy, Education and metaphors for argumentation. *Informal Logic*, 17(2), 177-188.

- Fullerton, T. & Swain, C. & Hoffman, S. S. (2008). *Game design workshop: A playcentric approach to creating innovative games* (2nd ed.). Burlington, MA: Elsevier Inc.
- Gilbert, M. A. (2014). *Arguing with people*. Toronto, ON: Broadview Press.
- Johnson, R. H. & Blair, J. A. (1987). Argumentation as dialectical. *Argumentation*, 1(1), 41-56
- Lakoff, G. & Johnson, M. (1980). *Metaphors we live by*. Chicago and London: The University of Chicago Press.
- Ritchie, D. (2003). ARGUMENT IS WAR – Or is it a game of chess?. *Metaphor and Symbol*, 18(2), 125-146.
- Suits, B. (1978). *The grasshopper: Games, life and utopia*. Toronto, ON: University of Toronto Press.
- Tindale, C. W. (1999). *Acts of arguing: A rhetorical model of argument*. Albany, NY: State University of New York Press.
- Walton, D. N. & Krabbe, E. C. (1995). *Commitment in dialogue: Basic concepts of interpersonal reasoning*. New York: State University of New York Press.
- Wittgenstein, L. (2009). *Philosophical investigations* (4th ed). (G. E. M. Anscombe & P. M. S. Hacker & J. Schulte, Trans.), (P. M. S. Hacker & Joachim Schulte, Eds.). Oxford: Wiley-Blackwell. Original work published 1953.
- Yong-Set, M. A. (2016). A ludological perspective on argument. *OSSA Conference Archive*. Retrieved from <https://scholar.uwindsor.ca/ossaarchive/OSSA11/papersandcommentaries/98/>