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Perspective Chapter – Developing a Semiotic Awareness of Argumentation in Academic Writing for Studies in Higher Education

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Abstract

The importance of argumentation in academic writing, while recognised historically, has arguably lost prominence alongside the rapid expansion of higher education since the early 1990s in the UK. This has been exacerbated by an increasingly prevalent technological intervention in teaching and learning processes. With this as a background, this chapter presents a discourse analysis of dissertation extracts to articulate the role of intertextuality in governing *interpretative*, *evaluative*, and *concluding* propositions in argumentation. Each proposition is examined as indexed to syntactical compositionality by which a previous proposition elicits a present one that awaits a future one, thus forming an argument. The analysis teases out what is at stake concerning the interdependence of signifying codes in textual relations and functions. It brings to the fore the notion of *instances of signification* that lends itself as a mediational apparatus to what counts as the intertextuality of argumentation – particularly why intertextuality matters in justifying a claim by giving logical reasons rather than wading into mere description or verging on textual turbulence. The chapter concludes by adding to long-standing debates on critical thinking in higher education a quest for a semiotic awareness of argumentation, highlighting the intertextuality of argumentation as facilitating rational deliberation for critical thinking in academic writing.

Keywords: Bakhtin, Kristeva, Peirce, intertextuality, argumentation, instances of signification, critical thinking in academic writing

1. Introduction

There has been a widespread concern with academic writing in higher education over the past few decades. Research has brought to prominence strategies and

resources for facilitating academic literacy attainment [1–6]. It addresses in common parlance the social constructionism of literacy practices. For example, the work of Lea and Street [3] conceptualises 'academic literacies' as a culturally embedded approach to learning activities across academic subjects. Such approaches are constituted in and enacted through the discursivity of knowledge, discourse, and power, addressing the dynamics of meaning in communication and representation. In further exploring the relationship of literacy to learning as to how meanings are constructed and contested among institutions, staff, and students, they have moved away from, for example, an adaptive concern with ways in which students are inducted into the practices of teaching and learning [7], with a sharing of viewpoints from students and staff on cultural and institutional contexts in which their literacy practices are situated. Recognising the variance and multitude of learner identities and positions within and across institutions [8, 9], what is defined as academic literacies shapes and is shaped by the primacy of social, cultural and linguistic factors. Yet, given the ontogenesis of literacy practices in various learning environments, there remain inadequate insights into how students are to become effective and successful communicators during and after their studies. For example, 'an important facet of written communication is being able to critically assess the writing of others, particularly at the graduate level as well as in professional programs' [10]. This calls into question an issue across all disciplinary levels in higher education – the success of universities in equipping students with transferrable knowledge, e.g., knowledge of the underlying substantive structures of the disciplines and that of the syntactic system of such structures for academic inquires made through these disciplines.

Argumentation, as a command of transferable knowledge, is a process of making an argument requiring active engagement and adherence to rules and conventions involved, in which deliberate thought and rationality are exercised. Though recognised historically, the importance of argumentation has arguably lost prominence alongside the rapid expansion of higher education since the early 1990s in the UK. This has been exacerbated by an increasingly prevalent technological intervention in teaching and learning processes. With this as a background, this chapter presents a discourse analysis of dissertation extracts to articulate the role of intertextuality in governing *interpretative*, *evaluative*, and *concluding* propositions in argumentation. Each proposition is examined as indexed to syntactical compositionality by which a previous proposition elicits a present one that awaits a future one, thus forming an argument. The analysis teases out what is at stake concerning the interdependence of signifying codes in textual relations and functions, as exhibited in argumentation. It brings to the fore the notion of *instances of signification* that lends itself as a mediational apparatus to what counts as the intertextuality of argumentation – particularly why intertextuality matters in justifying a claim by giving logical reasons rather than wading into mere description or verging on what might be termed *textual turbulence*.

Within the remainder of this chapter, intertextuality is first discussed in terms of the interdependence of signifying codes in textual relations and functions, following which deduction versus induction is explained. A subsequent analysis of dissertation extracts leads to a discussion of *instances of signification*, shedding light on what is disregarded or unrecognised in students' writing. In conclusion, the chapter adds to long-standing debates on critical thinking in higher education a quest for a semiotic awareness of argumentation, highlighting the intertextuality of argumentation as facilitating rational deliberation for critical thinking in academic writing.

2. Intertextuality as the interdependence of signifying codes in textual relations and functions

Since the late 1920s, Mikhail Bakhtin (1895–1975) has been a gripping reference point in contemporary discussions in literary studies, humanities and beyond. Many of his concepts characterise a nuanced view of elucidating the text and its relation to the world, particularly his dialogic positioning for literary texts [11]:

***The linguistic significance of a given utterance is understood against the background of language, while its actual meaning is understood against the background of other concrete utterances on the same theme, a background made up of contradictory opinions, points of view and value judgements – that is, precisely that background that, as we see, complicates the path of any word towards its object.

Thus, an intersection of semiotic allusions either within the text or across texts emerges from textual relations and functions. The system of signification is upfront, setting in motion a dialogic interpretation of the text in the light of its context. 'Being heard as such is already a dialogic relation. The word wants to be heard, understood, responded to, and again to respond to the response, and so forth *ad infinitum*' [12]. The meaning potential that arises from and flourishes through the dialogic perpetuity of texts becomes an end *in itself* or an 'unlimited semiosis' [13], i.e., a spiral of infinite signs through the interplay of the text and its context, 'perpetually formed anew as a result of reciprocal mediation, renewal and transformation' [14].

This has pertinence for argumentation as it provides a structural insight into textual relations and functions that regulate a logical process in which premises and conclusion are organised in line with rules and conventions. This is not merely a matter of syntactic process as to how one sentence is implicated in the other, i.e., the effect of one subject-predicate sentence on the other subject-predicate sentence. Rather, it is a semiotic process of *truth preservation* by engaging with intertextual signs, i.e., sentences stand in semiotic relation with each other. The truth of the *premises*, i.e., supporting propositions, serves to guarantee the truth of the *conclusion*, i.e., concluding proposition. The conclusion should maintain a foothold in *signification* in terms of conclusion following from the premises. Bakhtinian dialogism offers a means of semiotic deliberation for argumentation, i.e., sign actions upon a series of *interpretative*, *evaluative*, and *concluding* propositions – an interpretative proposition leading to an evaluative proposition then to a concluding proposition. This produces what is in effect an integration of the truth of the premises into the truth of the conclusion and therefore suffices for the intertextual coherence and continuity of argumentation.

Influenced by Bakhtin's dialogism, Julia Kristeva coined *intertextuality* to refer to the dialogic nature of interlocking textual relations and functions inherent in communication and representation. The concept has since become a new strand of modern thought across disciplines, denoting an analytic approach with expository detail [15–18]. It extends a Bakhtin's view that 'the production of meaning happens as a result of purely textual operations independent of historical location' and that 'the multiplicity of possible meanings in a text spring from that text and not from the multiplicity of possible occasions in which the text can be read' [19]. From a social constructionism standpoint, intertextuality has a dialogical property of discourse, particularly the interdependent coordination and stipulation of meaning across texts.

As Fairclough [20] describes, 'the property texts have of being full of snatches of other texts, which may be explicitly demarcated or merged in, and which the text may assimilate, contradict, ironically echo, and so forth'. The inseparability of a text and its social and historical milieus, alongside the relationship between its content and form, is arguably indicative of a heightened registration with the objective world that reflects the teleological dynamism of human interactions with the world, rather than simply ways in which social and cultural conditions coexist.

Thus, the play and counter-play of meaning are under way, rendering argumentation a semiotic process that blends previous propositions into present ones and present propositions into future ones. A text, e.g., a proposition, can be self-generative in the sense that 'it is caught up in a system of references to other books, other texts, other sentences: it is a node within a network' [21]. A given structure in which a text is presented can thus have implications for a larger structure with which it is associated. The constructing of a present proposition not only revolves around the meaning of a past proposition but also engenders and cultivates the constructing of a future proposition. Such homogeneity connects argumentation through a semiotic frame of organising thoughts and words on the move, by which an argument is both constructed through and bestowed by the interdependence of signifying codes.

Despite the relevance of intertextuality for learning, there has been inadequate attention to how intertextuality is implicated in academic writing. This chapter draws on Kristeva's [22] reinterpretation of Bakhtin's conception that 'horizontal axis (subject-addressee) and vertical axis (text-context) coincide, bringing to light an important fact: each word (text) is an intersection of word (texts) where at least one other word (text) be read'. This is also paired with Kristeva's [22] semiotic orientation of text as 'a permutation of texts, intertextuality in the space of a given text' in which 'several utterances, taken from other texts, intersect and neutralise one another'. Hence, in this chapter, intertextuality is confined to the interdependence of signifying codes in textual relations and functions, focusing on compositional moves between the details of an argument. This brings with it a semiotic configuration of writer-reader and text-context relationships, particularly a discernment of *textual*, *intertextual* and *contextual* relations and functions that allow one to see argumentation in a semiotic light.

3. Deduction versus induction

Deduction, as synonymous with Aristotelian syllogism, denotes a customary definition of valid arguments in terms of their *a priori* properties. Deductive argumentation, i.e., making an argument through deductive reasoning, refers to a conceptual move from the general to the specific. That is, if something is true of a category of things in general, then this truth applies to all legitimate members of that category. A deductive argument aims at *particularisation*, in which the conclusion is less general but more specific than the premises. For example, *Cats are nocturnal. This is a cat. It is therefore nocturnal*. Given this process progressing from an *opening* to a *closure*, the conclusion is guaranteed to be valid and reliable. However, if one of the premises is false, the conclusion will be false, albeit rules and conventions for deductive argumentation observed or conformed.

In contrast, inductive argumentation, i.e., making an argument through inductive reasoning, refers to a conceptual move from the specific to the general. That is, if

there is a sequence of individual pieces of information, then such pieces of information can be generalised into a conclusion relating to that sequence of pieces of information. An inductive argument thus works towards *generalisation*, in which the conclusion is less specific but more general than the premises. Given this process proceeding from a *closure* to an *opening*, the conclusion is *not* guaranteed to be valid and reliable. For this reason, the plausibility and reliability of induction have long been interrogated by philosophers [23, 24]. The distinction between deduction and induction is epistemological, given that 'when the mind reasons from cause to effects, the demonstration is called a priori; when from effects to causes the demonstration is called a posteriori' [25].

The *a priori* demonstration of deduction, as pertaining to deductive knowledge of facts, has implication for methodological approaches in humanities, as delineated in Gibson [26]:

***The usual character of an *a priori* approach is a pre-existing body of concepts and ideas that are put to work in the course of doing analysis. Many approaches to analysis have this character, such as critical discourse analysis, rhetorical analysis, semiotic analysis and critical narrative analysis, to name but a few. To work within these approaches/paradigms is to orientate to their body of work and assumptions. Of course, 'orientate to' does not mean 'agree with' or even 'stick within the confines of', but it does mean that there is existing theoretical and conceptual work that is used to organise analysis from the outset of a research project.

This renders a theoretical or conceptual frame of reference for organising academic writing, as exemplified in the following analysis. It corresponds to understanding the validity of argument as fundamental to academic writing. What counts as the validity of argument in *a priori* logical sense is whether the conclusion follows from the premises. The notion that the premises precede to the conclusion does not entail that the premises are necessarily true. Validity concerns the structure or form of argument, i.e., the logical connection between the premises and the conclusion, rather than the content of an argument. It is noteworthy that validity does not guarantee truth but *truth preservation*, i.e., if the premises are true, the conclusion must be true. It is also necessary to demarcate between argument and statement in term of their properties, given that argument has to do with validity while statement with truthfulness.

4. The analysis

This analysis provides an example of how the concept of intertextuality works to govern *interpretative*, *evaluative*, and *concluding* propositions in argumentation. Each proposition is examined as indexed to syntactical compositionality by which a previous proposition elicits a present one that awaits a future one, thus forming a line of argument. The interdependence of signifying codes in textual relations and functions serves as a conceptual frame of reference for analysing the following dissertation extracts from students on undergraduate programmes in social sciences in a higher education institution in the southeast of England, UK. In general, both dissertations presented a well-structured investigative study, with some insights into literature and occupational issues within subject areas. Permissions were sought prior to, and respect for privacy was observed throughout, the data collection and analysis processes. In this analysis, the term *argument* is used as a countable noun, designating a reason or collection of reasons in argumentation.

4.1 Student dissertation extract: Literacy strategies in other countries

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1 It is important to consider approaches to the literacy practices in countries other than the UK. This is
2 because other countries may have successful strategies in place to involve boys in literacy, which
3 could then be adopted by England to improve their practice. Tafa (2008) has compiled a study of the
4 Kindergarten reading and writing curricula in 10 countries in the European Union: Britain, Belgium,
5 France, Finland, Greece, Ireland, Luxembourg, Portugal, Spain and Sweden. It has been found that all
6 of the EU countries discussed now base their teaching guidelines in the kindergarten curricula around
7 the emergent literacy approach. This was defined by Clay (1966), and according to this approach,
8 children begin to read and write through experiences that occur naturally in their home environment,
9 through play with adults and other children. For example, children may begin to narrate a familiar
10 storybook and begin to attach meaning to the words. This highlights the importance of providing
11 opportunities for interaction, investigation, discussion and experimentation at kindergarten, which
12 continue to develop these experiences of early *reading* and writing. This research also shows that all 10
13 EU countries discussed (including the UK) have similar literacy strategies and practices in place.
14
15 In conclusion, Tafa (2008, 168) has found that 'it seems to have become clear in Europe that in order
16 to improve children's education and to prevent academic failure, in order to reduce illiteracy among
17 European citizens and to raise their level of education, emphasis must be placed on kindergarten
18 education'. This also provides evidence for the research of Qinghua *et al* (2005, 157) who claim that
19 'the quality of pre-school education can influence not only children's intellectual advancement but
20 also their social and emotional development, which can lay a solid foundation for children's lifelong
21 learning and be of social and economic benefit in the future'. This therefore highlights the importance
22 of early education and the foundations that are set for children during this crucial pre-school period,
23 especially for literacy.

4.2 Author analysis

The argumentation sets out with an overriding premise: 'It is important to consider approaches to the literacy practices in countries other than the UK' (line 1). This premise includes at least two underlying suppositions: (a) literacy approaches developed in other countries will be beneficial to the UK, and (b) in effect the reader is expected to accept or agree with the author's proposition. It is then followed by a subordinate premise: 'This is because other countries may have successful strategies in place to involve boys in literacy, which could then be adopted by England to improve their practice' (lines 1-3). What is emphasised in this premise are the 'successful strategies' used in other countries to involve boys in literacy. As intertextuality demands, this premise needs to bridge the preceding premise and the succeeding one. However, the reference to Tafa (2008) seems ineffectual for this purpose as it has little logical implication for its preceding premise by means of *categorisation*. To differentiate approaches used in the UK and those used in other European countries requires the conception of *mutual exclusivity*, i.e., different categories should *neither* overlap *nor* entail elements of each other. The follow-up claim, 'It has been found that all of the EU countries discussed now base their teaching guidelines in the kindergarten curricula around the emergent literacy approach' (lines 5-7), becomes logically inconsecutive as it lacks reference to the strategies for involving boys in literacy. While the reference to Clay (1966) exemplifies the 'emergent literacy approach', there is yet little bearing on the possible impact of this approach on boys' engagement with literacy. Further elaborations (lines 9-12) leave the reader in doubt – where are the grounds for accepting this approach as beneficial to the involvement of boys in literacy? The proposition, 'all 10 EU countries

discussed (including the UK) have similar literacy strategies and practices in place' (lines 12-13), comes to seem problematic if it is to be argued that 'other countries may have successful strategies in place to involve boys in literacy' (line 2). This strays even further from the point, given that this proposition fails to preserve the truth of the main and subordinate premises (lines 1-3).

Such deficiency in recourse to the intertextuality of relations and functions makes the argument plunge further into a logical turmoil within the second paragraph. The premises established in support of the conclusion are seemingly inadequate in providing necessary intertextual continuity and consistency as the grounds for the conclusion. This is observed through an absence of a series of coherent moves from one proposition to another towards the conclusion of the argument. The concluding proposition centres on the claim 'emphasis must be placed on kindergarten education' (lines 17-18). Though this may be inferred as having implication for involving boys in literacy, there is no attempt to specify the 'approaches to the literacy practices in countries other than the UK' (line 1). Moreover, given that this proposition entails an early proposition, 'It has been found that all of the EU countries discussed now base their teaching guidelines in the kindergarten curricula around the emergent literacy approach' (lines 5-7), it begs the question on logical legitimacy. Rather than being proved, this proposition is simply granted, i.e., the author simply assumes what he or she should be proving. This renders further evaluative propositions (18-23) untenable, albeit with an attempt to strengthen what has already been put forward through the argumentation.

Entangled with misperceived textual relations and functions, the interdependence of signifying codes is in jeopardy concerning a syllogistic ordering of premises and conclusion. This makes the line of argument even more disordered. The proposition in the subordinate premise (lines 1-3) entails a hypothetical form of syllogism explaining that one thing leads to another, with 'if' to introduce an antecedent and 'then' a consequent. That is, *if* other countries have successful strategies in place to involve boys in literacy, *then* these strategies can be adopted by England. In compliance with this hypothetical syllogism, a valid argument would have been constructed as follows:

Premise 1	If other countries have successful strategies in place to involve boys in literacy, then these strategies can be adopted by England.
Premise 2	Other countries have successful strategies in place to involve boys in literacy.
Conclusion	Therefore, these strategies can be adopted by England.

This, as the function of the proposition (lines 1-3), fails to actualise itself in argumentation. There is a lack of attention to intertextuality in terms of affirming that other countries have successful strategies in place to involve boys in literacy. This triggers a logical impasse to such an extent that the grounds for a deduction-based conclusion are absent, i.e., the conclusion does not follow from the premises. It leaves the reader in doubt as to (a) the claim serving as a consequent of the argument, (b) the warrant for this claim, and (c) the case to be made for the conclusion.

4.3 Student dissertation extract: Harnessing nature's metaphors for new understandings and possibilities

1   The use of various ways of experiencing nature in order to stimulate and support the whole self is
2   further extended by the use of nature's features and processes as metaphors of the self. Worsham and
3   Goodvin (2007) describe the natural environment in a therapeutic horticulture project as providing a
4   'metaphorical environment', since metaphorical meanings can be accessed through observing nature.
5   Individuals can also create metaphors through physically interacting with nature. 'Building a Home-
6   in-Nature' is a nature therapy method in which the process of constructing a den in a natural
7   environment, using nature's resources, is a concrete, non-verbal metaphor relating to the client's
8   actual home and ideas about the psychological concept of 'home' (Berger 2004; Berger and McLeod
9   2006). Moreover, the physical construction of the home in nature may involve 'a parallel process of
10 building a safe, personal, inner home' (Berger 2004, 2006, 2007). In this way, creation of metaphors
11 from nature may prompt personal change (Pedretti-Burls 2007).
12
13 In particular, an approach that draws parallels between natural cycles and the self can prompt
14 transformation. Observation of and involvement in life cycles, for example, the growth, survival and
15 death of a plant, may stimulate expression of similar stories within an individual (Berger and Lahad
16 2009). Berger (2008a, 271) states that this may help clients to put their own life stories in the context
17 of 'a primal sense of continuity and cycle' and to understand that they and others are a part of this
18 cycle (Berger and Lahad 2009). Similarly, Farrell-Erickson (2009) suggests that observation of animal
19 interactions may support children in making sense of their own interactions and attachments with
20 others. Making connections between ourselves and natural processes in these ways is powerful
21 because nature provides the necessary distancing but also an opportunity for the normalising of
22 experiences (Berger 2008b; Berger and Lahad 2009). Moreover, interaction with nature in order to
23 change the story in nature, for example, by caring for animals, can help an individual to broaden their
24 narratives (Berger 2003, 2007, in Berger 2008b; Berger and McLeod 2006), achieve reconciliation
25 with events (Pedretti-Burls 2007), develop a sense of hope and possibility (Berger 2008; Berger and
26 McLeod 2006), and become more resilient (Berger and Lahad 2009).

4.4 Author analysis

The first paragraph commences with a primary or leading premise of argument: 'The use of various ways of experiencing nature in order to stimulate and support the whole self is further extended by the use of nature's features and processes as metaphors of the self' (lines 1-2). What is subsequently required as a secondary or subordinate premise is the literature on this topic to substantiate the primary premise. References to Worsham and Goodvin (2007), Berger (2004), and Berger and McLeod (2006) are relevant and blended through textual relations (lines 2-9). The use of 'moreover' (line 9) is apposite in introducing an additional proposition (lines 9-10). However, considering that a self-evident proposition that humans are conceptual beings is encapsulated in the primary premise in term of 'the whole self', this additional proposition with the quotation of 'a parallel process of building a safe, personal, inner home' (lines 9-10) becomes superfluous in effect. Moreover, resorting to such quotation – rather than paraphrasing in the student's own words – is perhaps suggestive of some uncertainty in fully understanding the quoted author's meaning. As it stands, this additional proposition does not provide a compelling account of the intrapersonal dimension of metaphorical thought in eliciting personal change. From an *intertextual* viewpoint, this adds little weight to what the subsequent proposition contends: 'In this way, creation of metaphors from nature may prompt personal change' (lines 10-11). This proposition is not self-explanatory but conditional as it needs to be endorsed by the evidence presented in the previous proposition; it would

otherwise remain a supposition rather than a proposition. From a syntactical compositionality perspective (see Section 5.1), this proposition is such that the sense is elusive with an *intertextual* leap from the additional proposition (lines 9-10).

As the argument proceeds through to the second paragraph, the use of 'in particular' is *intertextual* as it forges a link between what is previously mentioned and what is now introduced as an example of personal transformation (lines 13-14). Three consecutive premises (lines 14-20) lead to a conclusion: 'Making connections between ourselves and natural processes in these ways is powerful because nature provides the necessary distancing but also an opportunity for the normalising of experiences' (lines 20-22). Given the *a priori* nature of deductive argumentation (see Section 3), the validity of this conclusion lies in a causal connection, rather than a transitory succession rendered by intuitive, wishful thinking. This concerns whether the instance that 'nature provides the necessary distancing but also an opportunity for the normalising of experiences' (lines 21-22) can serve as a prerequisite that are both *necessary* and *sufficient* for the instance that humans make connections between themselves and natural processes. Yet, the three consecutive premises (lines 14-20) cannot be fully identified as the *necessary conditions* for what is claimed in the subordinate clause: 'because nature provides the necessary distancing but also an opportunity for the normalising of experiences' (lines 21-22). It is apparent that these premises do not form the *sufficient conditions* for the conclusion. This raises a question of how the logical sequence in the concluding proposition can be justifiably asserted to be both *necessary* and *sufficient*.

As it stands, the composition is descriptive in style and exploratory in disguise. An overall sense of intertextuality comes to seem tenuous, haphazard, and less filtered through an awareness of the interdependence of signifying codes in textual relations and functions. This may be attributed to an unfledged understanding of how such relations and functions are semiotically bonded to accomplish a cogent line of argument. Furthermore, circuitous references to Berger and the co-authors in a skimpy, unscrupulous manner have lessened the effect on the reader to engage with a more succinct and reasoned approach to thematic analysis necessary for literature review.

5. Discussion

The preceding analysis brings into view the role of intertextuality in governing *interpretative*, *evaluative* and *concluding* propositions in argumentation. Each proposition is indexed to compositional connectivity by which a previous proposition elicits a present one that awaits a future one, thus forging ahead with an argument. The notion of *instances of signification* as a mediational apparatus in argumentation helps understand why intertextuality matters in justifying a claim by giving logical reasons rather than wading into mere description or verging on what might be termed *textual turbulence*. Endorsed by instances of signification, the intertextuality of argumentation in turn provides affordance for 'the production and interpretation of signs constitutive of meaning making' [27], resonant with Peirce's [28] evolutionist approach to the sign that 'it shall be interpreted in another sign; and its whole purport lies in the special character which it imparts to that interpretation'. Therefore, understanding argumentation as sign action makes the interdependence of signifying codes more bound up with what goes on in argumentation where such codes mediate and endorse each other by 'creating an aura of semiotic unity and enrichment' [29]. Implications of this analysis for academic writing are as follows:

5.1 Sign action as a semiotic awareness of intertextual engagement and relationship

As revealed in the analysis, intertextuality brings with it sign action as a semiotic awareness of intertextual engagement and relationship whereby there is no single, isolatable process of knowing. The textual relations and functions necessitate the response to a previous sign action but also the anticipation of a future one in argumentation. For example, there are misconceptions in students about differences between *conclusion* and *summary* due to a lack of recognition of sign action in intertextual thinking. Conclusion is where premises culminates to forge an ending proposition, whereas summary is mere reiteration of key propositions established in the main text. If the conclusion is to be handled as a summary, then argumentation becomes intertextually inconsistent. That is, the writer should not conclude something to be valid simply by assuming that something to be the case. As logical syllogism demands, the conclusion should not contain any of the supporting premises, or it *begs the question*. A valid argument is a set of incremental propositions logically organised and syntactically mediated. Without appreciation of this, an argument can be muddled or derailed, resulting in falsehood or absurdity.

Moreover, the notion of 'syntactical compositionality' [30] is important. A sentence is constructed by sub-sentential components, e.g., words and phrases, and the ways these components are combined are not only syntactical but semiotic in nature. The function of linguistic representation manifests itself as sign action through which words and phrases are constructed into an entire syntactic structure, e.g., the logical form of an argument. Although the linguistic meaning of a sentence is encoded and decoded by means of the grammar of a given language, the complexity of such meaning lies in not simply the grammar but the sign action of both the speaker or writer and the listener or reader. As evident in lines 9-11 in Section 4.3, weight is given to the direct quotation 'a parallel process of building a safe, personal, inner home', with a textual leap from the additional proposition introduced by 'moreover' (line 9), thus making the reader wonder about the writer's intention. This may be implicative of the writer's scant comprehension of the syntactic realm of language as sign action in linguistic representation.

It is also worth mentioning the intentionality of semantic and pragmatic meaning in linguistic interaction. Semantics concerns the relationship between linguistic utterances and the syntactic rules deployed to govern such utterances. Semantic structure involves a part-whole relationship, i.e., the meaning of a sentence is determined by what the constituent words and phrases are meant and how they are combined. Pragmatics nevertheless concerns the relationship between the speaker or writer and what he or she says or writes. It is confined to the functionality of linguistic communication and representation. As shown in the analysis, semantic meaning can yield answers to questions of how understanding of meaning can be obtained and what significance of such understanding may be for the writer. In contrast with the intrinsic nature of semantic intentionality with which the writer encodes or decodes a sentence based on grammatical rules of a given language, pragmatic intentionality implies the meaning of a sentence beyond what is logically manifested by that sentence, i.e., 'what is done with language beyond saying' [31]. This reflects the interpersonal relationships through which the utterance of that sentence is encoded or decoded. The assumption that pragmatic intentionality stands in relation to its context suggests that meaning can change as a result of the interaction of a sentence with the context from which it derives. Such contextual factors can have subtle or nuanced meaning embedded in the

connection between what is said and what is conveyed. Thus, intertextual engagement requires the writer to make pragmatic inferences, i.e., pragmatic meaning can be obtained by engaging with the implicature located in an utterance.

5.2 Critical thinking and knowledge transfer

Moving to a wider educational context, this analysis has relevance for critical thinking in teaching and learning in higher education. Predicated on 'intellectualism as central to the ethnography of university life' [32], students and teachers are to understand that 'the university world is generally associated with rationality, methodological principles, objectivity and logical argument' [33]. Critical thinking is a way of developing students' capacity to challenge different assumptions and perceptions through theorisation, rational thinking, and evaluation [34–36]. As observed in the analysis, how thoughts and words come together in argumentation is important to critical engagement, given the connections between intertextuality and sign action. This can broaden students' horizon in terms of what there is to be known in a wider social, cultural, and historical context. How can critical thinking be honed as a mode of cognition that foreground deliberate thought and rationality? Given critical thinking as a ubiquitous concept in higher education, why has it come to seem more routinely expected by institutions than habitually exercised by students? To what extent can critical thinking be sustained through an awareness of the intertextuality of argumentation? Arguably, students' greater engagement with critical thinking in academic writing becomes possible if the intertextuality of argumentation is cultivated as a collective awareness rather than simply as a condition or preference of an individual writer.

Further pedagogical implication can be addressed concerning the development of transferable knowledge in academic writing. First, given that reference to literature is integral part of academic writing, students are expected to research the documentary evidence or evaluate current developments of their subject areas of interest. In either case, their references to other authors are often restricted to adopting their viewpoints, rather than using them to cast light on the making of their own argument. The use of literature as such sometimes outweighs critical thinking and rationality that students are anticipated to demonstrate. This renders their argument incomplete, distorted or faulty, e.g., failure to organise propositions into a logical sequence, as shown in Section 4.1. By enacting the intertextuality of argumentation, critical thinking may be more effectively exercised in the review of literature.

Second, research activities involving undergraduate students across various disciplines in humanities and social sciences are often tutor-dependent or involuntarily actualised, particularly when assigned to them as a mere task-based activity. Critical thinking involved appears to be channelled towards certain directions by external forces, e.g., tutors' consistent or contingent intervention, rather than through students' own commitment and dedication. This results in students' cognizance less than discerning or theory-informed to the point where little is accomplished in a proactive manner, as reflected in academic writing. With a heightened awareness of the intertextuality of argumentation, critical thinking can become more integrated into the pursuit of knowledge in that words and thoughts are indispensable for 'the centrality of intellectual well-being in higher education' [32].

6. Concluding remarks

Concluding on a note of dialecticism, the post-Kantian perspective of knowledge and truth resonates with an axiological stance in this chapter, that is, the internal factors within an individual are fundamental to learning and development, only through which can the external factors become operative. The interdependence of signifying codes in textual relations and functions points to the intertextual necessity of argumentation as one's determination to uphold a semiotic awareness of syntactical compositionality. Arguably, when the intertextuality of argumentation is called for in higher education, such awareness in turn works to sustain a mode of sensitising intertextuality as a conceptual frame of reference in academic writing. In the context of 'widening participation in higher education' [37], the intertextuality of argumentation can be of instrumental value for developing transferable knowledge in teaching and learning processes. Furthermore, given an increasing demand for postgraduate qualifications by employers, this chapter may throw light on the provision of pre-sessional study skills courses across diverse academic programmes, including TESOL and Applied Linguistics.

Author biography

James Ma is an independent scholar in linguistics and semiotics. He received his PhD from the University of Bristol and undertook subsequent postdoctoral training at the University of Oxford. Prior to this, he studied at the University of Nottingham. His scholarship centres on a methodological synergism of Peirce and Saussure alongside post-structuralism and phenomenology for understanding the nexus of language, meaning and consciousness. He publishes articles in *Language and Sociocultural Theory*, *Social Semiotics*, and *Mind, Culture, and Activity*.

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