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THE ONTOLOGICAL AND EPISTEMOLOGICAL FOUNDATIONS OF QUALITATIVE AND QUANTITATIVE APPROACHES TO RESEARCH

WITH PARTICULAR REFERENCE TO CONTENT AND DISCOURSE ANALYSIS OF TEXTBOOKS

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Abstract

The paper argues that CDA (Critical Discourse Analysis) provides an appropriate research framework for analyzing textbooks with regard to the identification of cultural depictions. By drawing some examples concerning the techniques used in textbook analysis, this paper has come to suggest that each technique reflects aspects of the three major paradigms such as positivism, critical theory and interpretivism. This finding then drives us to reject the methodological distinctions raised by paradigmatic purists, and adopt instead a more hybrid approach to research methodology by supporting the notion that CA (Content Analysis) and CDA suggests a similar ontological underpinning for quantitative and qualitative approaches. Succinctly, this study suggests that any quantitative approach is underpinned by qualitative considerations and vice versa.

Keywords: qualitative and quantitative methodology, research paradigms, content analysis, critical discourse analysis, epistemology, ontology.

INTRODUCTION

This paper aims to explore the epistemological and ontological issues concerning social research and their implications to the research of textbooks regarding cultural depictions. My reason for focusing on content analysis and discourse analysis rests in the fact that both exhibit contrasting approaches to research stemming from the two major research paradigms, positivism and constructivism respectively. Another rationale that motivated my interest on these two research approaches lies in the absence and unsystematic use of discourse analysis or qualitative content analysis approaches to textbook research regarding the depiction of the 'other'. The most commonly used approach is content analysis whereas researches hardly do they refer to epistemologically considerations. The failure by content analysts to examine the ontological and epistemological assumptions of their research process, leads content analysis to be viewed as a rigorous and rational method which adheres to the positivistic model. I will allude further to this point in later sections.

Although it is widely agreed that quantitative and qualitative research methods address different but complementary aspects of practices and thus they can be combined, it becomes necessary to probe beneath the surface of the technical level and adopt an approach which views both research paradigms as underpinned by all epistemological and ontological nuances. Therefore, the remainder of the paper builds on the assumption that every form of quantity to be established uses forms of quality and vice versa. If we think of geometry and literature as belonging to natural sciences and humanities respectively, we could may well scrutinize their epistemological foundations beneath the scientific and humanistic divide. This being the case, we may well argue that as the assignment of numbers in geometry requires qualitative observations in order to make inferences between the relationships of the angles of a triangle, likewise, metrics and prosody in a poem may well ascribe meaning to its content. The reason I make this point here is to set the scene for the arguments that will follow as to show that the philosophical distinctions between quantitative and qualitative content analysis or discourse analysis are blurring when a 'provisionalist' epistemology is adopted for both approaches. Before proceeding to achieve this aim I deem as important to explore in detail the basic principles that underlie the epistemology and ontology of the three most debated competing paradigms.

Paradigmatic shifts and their implication in social research

The aim of this section is to tackle the concepts of epistemology and ontology which underpin the three major competing paradigms (positivism, critical theory and interpretivism) and each of them will be scrutinized and applied accordingly to Critical Discourse Analysis in later sections.

Before going on to address the philosophical issues, I consider as important to note that commentators do not have a consistent way of referring to these paradigmatic approaches. For instance, Tashakkori and Teddlie (1998) refer to paradigms of logical positivism, post-positivism, pragmatism and constructivism while Guba (1990) dissociates positivism from the other three paradigms that have emerged as a challenge to it which are post-positivism, critical theory and constructivism.

Usher (1996) refers to positivism/empiricism, hermeneutic/interpretivism and critical theory whilst Bryman (2004) refers to positivism and interpetivism and distinguishes the later from its variants known as phenomenology, hermeneutics and symbolic interactionism.

The most recent research paradigm put forward by many theorists and practitioners in order to overcome the paradigmatic schism is 'pragmatism'. Advocates of the so-called pragmatic approach to research have over emphasized its practicability in combining diverse research methods while underestimating the importance of philosophy for social and educational inquiry (Tashakkori and Teddlie, 1998). The term ' paradigm' in its most generic sense has philosophical connotations for many researchers. The contention of this paper is that since almost all researchers whether they ascribe to the positivist, constructivist or pragmatic tradition, adopt the conventional term ' paradigm' to offer a new range of opportunities to research, the role of epistemology and ontology becomes vital. Not surprisingly, most commentators employ a common reference point when defining 'paradigms'. Schwand (1989) defined paradigms as 'worldviews' and beliefs about the nature or reality, knowledge and values. Similarly Guba and Nincoln (1994) referred to paradigms as worldviews or belief systems that guide researchers. Vedeler (2000) by describing paradigms as 'theoretical frames', contends that philosophical considerations precede determining the choice of methods and therefore offer a better understanding of advantages and disadvantages of quantitative and qualitative approaches. A different view of 'paradigm' is set forth by Morgan(2007) who eliminates the essential role of epistemology for social inquiry by rejecting the 'epistemological stance' version of paradigms and adopting instead an alternative approach, the aforementioned 'pragmatism' which is grounded on the notion of 'what works', the accordance of fitness to purpose' and the like.

From all the attempts to define paradigm it follows that the social inquiry involves 'methodology-as technique' and 'methodology –as- philosophy'. According to Hammersley (2006) the former depicts research as the involvement of particular methods or procedures, those that fall within the category of natural sciences and are distinguished from humanistic disciplines, while the latter concerns fundamental questions about the goal of knowledge of research, the ideal of truth and the possibility of objectivity.

Although Hammersley views the role of philosophy as essential to research, he argues that there are important limits to its contribution for it does not enlighten researchers how best to go about investigating particular topics. In contrast, there are those who advocate a top-down approach to research arguing that ontological assumptions give rise to epistemological ones, which in turn determine the unfolding of methodology which gives rise to issues of instrumentation and data collection (Hitchcock and Huges, 1995; Guba, 1990).

Before the discussion is pursued on exploring the basic attributes of the three major paradigms, two important concepts need to be tackled, ontology and epistemology. Ontology traces its meaning from the ancient Greek present participle ωv/on/ which means 'to exist'. Therefore ontology in the social world is taken to mean the kinds of things that exist. Guba (1990) refers to ontology as the nature of the 'knowable' or the nature of 'reality'. Assumptions of an ontological kind concern the very nature of social entities being investigated. Bryman (2004) identifies two ontological positions concerning social research, 'objectivism' and 'constructionism'. According to Bryman, objectivism entails that the social entity in question adheres to an external objective reality independent of the researcher's awareness. At the opposite extreme there lies constructionism which implies that social entities can and should be considered social constructions built upon the perceptions and actions of social actors. This set of ontological assumptions is also known as the nominalist-realist debate proposed by Burrell and Morgan (1979). There are two other versions of constructionism, 'idealism' (Smith and Heshusius,1986) as well as 'relativism'. Guba (1990) employs relativism as the ontological position of the constructivist paradigm. According to Guba the relativist position implies that there are multiple interpretations of reality, locally and historically specific and none of these mental constructions can either be false or correct. Bernstein (1983) criticizes the relativist stance for being anti-foundational, for, as he argues, we are floating in a world where nothing binds us and where all are limited to a clash of taste and opinion.

In addition to the two dominant extremes of the ontological position, Guba (1990) places critical realism in between, drawn from the work of Cook and Campbell who contend that humans conceive the natural causes of the real world imperfectly (1979). The criticality of 'critical realism' is attributed to the fact that once its practitioners identify the structure or processes which have generated the events of social reality, they seek to reproduce and transform the status quo (Bhaskar,1975). This issue will be a core topic in the next section as this has implications for identity and cultural formation form the point of view of discourse and content analysis.

While ontology refers to the nature of knowledge and reality, epistemology concerns the very basis of knowledge-whether this is hard, real, transmittable in a concrete form, or whether it is softer and more subjective, based on personal experience and insight (Cohen, Manion and Morrison,2006). It is worth noting that the term epistemology is derived from the ancient Greek verb 'epistame' which means to know something very well; to have internalized something by experiencing it- denoting a close relationship of the knower and the known. Hence, knowledge viewed in this light it is seen by epistemological purists as a subscription to the humanistic sciences model interpretivism/constructivism. The other extreme position which views knowledge as objective and tangible, aligns to the methods of natural science and it is associated with an epistemological position known as 'positivism'. In other words, taking an extreme subscription to either/ or a subjective/objective epistemology or a relativist/realist ontology, there emerges a pure adherence to the qualitative/quantitative research respectively. Thus, the incompatibility thesis put forward by the quantitative and qualitative purists emerges. The paradigmatic 'incongruence' is grounded on the contention that quantitative research divergent epistemological packages and thus exhibit incompatible views about the way in which social reality ought to be studied, and hence what should be regarded as proper knowledge (Bryman,1998).

Three paradigms will be of focal concern for this paper (positivism, critical theory and interpretivism) and these will be examined in terms of their underlying philosophical issues and their methodological implications respectively.

Positivism

The positivist paradigm carries within the social research pejorative connotations. Due to its reliance on the natural science model, it has been characterized by many philosophers and social critics as inadequate in science. Since the core of positivism has placed extreme emphasis on direct observations, it has been criticized for disregarding values, informed opinion, moral judgments and beliefs (Habermas,1974; Horkheimer,1972; Kvernbekk,2002; Shadish,1995).

A philosophical perspective, based on realist ontology, asserts that reality is driven by immutable natural laws. The role of science is to strive for casual relationships, an essential criterion for research which corresponds to internal validity. Research then becomes objective, measurable, predictable and controllable. As far as epistemology is concerned, it is rooted in an objectivist position and to use Guba's words in a 'dualist' position for the inquirer adopts a distant, no interactive posture to his object of inquiry. Smith (1983) names this relationship of

the knower and the known as a 'subject-object' relationship to the subject matter. He draws this distinction in order to highlight the value neutrality of the positivist school of thought.
Another issue of interest for positivists is generalizability. They contend that quantitative research is time and context free.

Of great concern is the issue of the relationship between theory and research as this will have further implications for a later section. It is commonly asserted that the positivist approach to research is deductive in nature in that is tests an a priori hypothesis or theory. This emphasis on arguing from the general to the particular has been noted by many authors (Goetz and LeCompte, 1984; Patton,1990). In contrast to this view, Bryman (2004) argues that positivism entails elements of both a deductive and an inductive approach.

From a methodological point of view, positivism is inclined to the side of experimentation. Guba and Lincoln (1994) acknowledge this as they impose a top-down approach to research. Since they place ontology at the top of the hierarchy and methodology at the bottom, it follows that the cause –effect ontological position of positivism constrains research at the methodological level to the use of empirical tests under carefully controlled conditions which Cook and Campell (1979) name as the experimental design.

Critical theory

Tashakorri and Teddlie (1998) conceive critical theory as emphasizing historical methods in contrast to the other three research paradigms which are characterized as an on-going phenomena. For that reason they exclude critical theory from the comparisons they make between the paradigms. The contention of this paper is that critical theory does involve on-going processes driven by ideological, social, cultural, political and economic forces and values. Being prescriptive and normative in nature it suggests what behavior in a social democracy should entail (Fay,1987;Morison,1995). Thus, the role of critical theory is transformative by means of changing the status quo so that once participants become aware of how oppressed they are, they can act to transform the world (Guba, 1990).

Along with the transformative intention, there appear to be aspects of prediction and control sustained from positivism. What Habermas (1972) envisions as proper knowledge is the kind of knowledge which is made up by three cognitive components: prediction and control, understanding and interpretation, emancipation and freedom. He conceives the first two as reflecting positivism and interpretivism respectively, while the third applies to critical theory. The latter not only subsumes and requires the other two, but also goes beyond them.

The underlying ontological assumption which underpins critical theory is critical realism. Since the values of researchers intrude in to their findings, ontology is coupled with a subjectivist epistemology.

Methodologically, critical theory is conceptualized as emancipatory and critical ideology with its basic research instruments being ideology critique and action research (Habermas, 1976). Ideology critique deserves extended consideration in this paper, for it involves the examination of the values, practices and interests emanating from particular dominant groups at the expense of disempowered groups. The implication that ideology critique has for textbook research in regard with cultural understandings will be further discussed in a later section.

Constructivism/Interpretivism

The advent of constructivism as a legitimate paradigm for conducting qualitative research resulted as a reaction to quantitative methodologist's effort toward reconciliation of positivism and post positivism. The most well-known qualitative researchers Guba and Lincoln (1990) mapped out a series of black and white contrasts between positivism and constructivism in order to stress their incompatibility.

Ontologically speaking, there are multiple realities constructed by actors of research. Thus they argue that research is grounded on a relativist ontology which rejects the existence of any possible correct reality.

On an epistemological level, they reflect Smith's (1983) contention that the inquirer takes a subject-subject posture whereas facts and values are inextricably linked. Hence, since the knower and the known are inseparable, research is value-bound.

As almost all naturalists, they align to the credence that research is time and context bound and that generalizations are not possible. As far as casual linkages are concerned, they contend that it is impossible to differentiate causes from effects.

A final tenet of constructivism concerns the relationship between theory and research. As already noted, research based on constructivism aligns to an emphasis of inductive logic by means of arguing from the particular to the general. From a methodological point of view, it proceeds hermeneutically by depicting individual construction as accurately as possible in order to compare and contrast it dialectically with the aim of reaching and generating a substantial consensus.

Having delineated the core philosophical elements of the three major competing paradigms in social research, the remaining of the paper will seek to elaborate a compatibility thesis arguing that quantitative and qualitative research to share an epistemological touchstone. This will be done by examining the epistemological and ontological perspectives which underlie

content analysis and critical discourse analysis research methodologies with respect to textbook analysis.

Content analysis (CA) and the misleading view of associating it with the positivist tradition

The purpose of this section is to bring into the fore the basic elements of quantitative and qualitative CA as to show that their respective epistemological distinctions are not perfectly clear. Even though researchers acknowledge that CA is on border line between quantitative and qualitative methods, rarely do they dig out issues of epistemology and ontology.

Researchers in their technical and theoretical debates have given little attention to the qualitative approach analysis. The language which most content analysts use to define CA reflects the merits and attributes of the scientific method which aligns to positivism. A vast amount of literature refers to CA as a research technique which endeavors for the objective, systematic, replicable and quantitative description of symbols of communication or the manifest content of communication (Berelson,1952; Krippendorf,2004,Riffe et al.,1998). In line with the positivist tradition of inquiry, CA is viewed as aiming towards systematic analysis for the purpose of testing hypotheses. This is what Weber (1990) refers to as *hypothesis validity*, which he contends relies on correspondence among variables and the correspondence between these relationships and theory. It follows that CA is portrayed, to be, as in the case of an experiment within a natural sciences framework, more about conformation rather than discovery.

CA And Interpretivism

At this point, the debate now shifts to the issue of whether CA can be placed within an interpretivist epistemological paradigm and hence is likely to involve the use of more qualitative approaches to text analysis. Although CA, as mentioned above, shares many advantages of quantitative social research (such as validity, reliability, objectivity and generalizability), yet it has been viewed as inadequate to the study of social and cultural objects of a text as these are the product of historical, political and social processes. Most content analysts contend that the use of qualitative approaches to CA yields research to the discovery of latent content, beyond the presence of the mere and manifest content of the words (Neuendorf, 2002; Gillian, 2007; Krippendorf, 2004; Weber,1990; Robson,1995). By manifest content, analysts take to mean those elements of a text that are physically present and countable, whilst by latent content they denote the deep meaning and unmeasured characteristics of a text. The first denotation of content reflects the methodological repertoire of the positivistic paradigm, while the latter mirrors the naturalistic or interpretivist tradition. The back and forth movement between manifest and

latent content implies that there is a dialogical intersection between the underlying philosophies of quantitative and qualitative CA. If the epistemological issue of positivism is scrutinized in terms of causation, then the qualitative approach to CA may well be seen in a new light as one contributing to unravel the causal and correlational relationships.

According to Shadish (1995) there has been a false association of causation to logical positivism. Even logical positivists have rejected the Aristotelian view of causes as unobservable entities giving rise to phenomena and have adopted, instead, the vision of science as aiming to predict observable phenomena. To put it in Salmon's words, it aims to "discover regular patterns among our sensations that will enable us to predict future sensations"(1984,P.5). In the case of textbook analysis this can be done by examining the amount of coverage of the issue in question in terms of how this changes over time and in relating it to the wider social or cultural processes. Additionally, the researcher can predict about its possible future changes. According to Pettigrew's (1997) view of procession analysis, the underlying assumption of process thinking is that social reality is not static but dynamic and ongoing. He stresses the importance of history and other processes which are rooted at a cultural level and the blending of those to the other context which requires a higher level of analysis (sector changes and alterations in national and international political and economic context). As far as causation is concerned, it is neither linear nor singular. The aim here, as Tilly (1984) states is to pursue proximity, not fixed and taken for granted causes. From this it follows that the content analyst, in order to identify causal effects in documents or texts, should adopt a more critical approach underpinned by critical realist ontology so as to probe beneath the surface of the mere manifest content of the words. Moving beyond the observable and countable manifest content does not only mean that the content analyst should adopt more qualitative methods and approaches as to examine the relationships among concepts in a text. The contention of this paper is that textual analysis should involve more than just a mere back and forth movement between quantitative CA and qualitative CA. The issue of adopting critical realist ontology when analyzing textbooks has not been debated a great deal in the literature. For, most content analysts often offer a mechanical and technical approach towards combining quantitative and qualitative methods and overlook the overall philosophy which lies underneath. Holsti (1969) and Pool (1959) subscribe to this approach which views the relationship of quantitative and qualitative CA as circular and complementary. Busha and Harter (1980) conceive of quantitative CA and qualitative CA methods as *conceptual analysis* and *relational analysis* respectively, whereas the former establishes the existence and frequency of concepts in a text and the latter builds on the former by examining the relationships among concepts in a text. Therefore, the core aim of this paper becomes more than a quantitative-qualitative

compatibility thesis of CA but endeavors to unravel a unified ontological ground which lies underneath the two research methods.

Critical Realism at the border lines of Content and Discourse Analysis

As already noted, CA may well offer quantitative and qualitative approaches to research. The aim of this section then is to discuss the implications of these two methods in relation to discourse analysis which sometimes takes the form of critical discourse analysis. Particular reference will be made on textbook analysis regarding the depiction of ethnic or cultural groups.

Yet, most content analysts have conceived of quantitative and qualitative CA methodology as falling along a continuum (Pool,1959; Holsti,1969; Weber,1990; Neuendorf,2002; Krippendorf,2004; White and Marsh,2006). Thus, by viewing CA only from this perspective, the conventional notion of the paradigmatic incompatibility remains unquestioned, since rapprochement occurs only at a technical level which engages CA into a process of reduction, quantification and codification of text into manageable content categories and at a later stage the examination of their relationships or sometimes the identification of new emerging patterns. The approach to text analysis which this present paper suggests is that of 'critical theory'. The aim should involve more than just mapping out a series of binary oppositions so as to examine the number of positive or negative words used to describe cultural/ethnic groups and their mere comparison to the self-presentation. The supporting for this standpoint is given by Foucault as he points out that :

Pre-existing categories must be held in suspense. They must not be rejected definitely, of course, but the tranquility with which they are accepted must be disturbed; we must show that they do not come about by themselves, but are always the result of a construction the rules of which must be known and the justifications of which must be scrutinized (Foucault, 1972.p.25).

The above mentioned stance is compatible with critical theory noted earlier. The methodological milieu of this paradigm lies within critical discourse analysis (CDA) and in the present case it subscribes to the wider context of critical curriculum studies. The basic assumptions of this ' interdisciplinary approach' are founded on a critical realist ontology which provides researchers with systematic and critical techniques for analyzing and describing both spoken and written texts. This is done by taking into consideration both the larger ongoing social processes as well as the history at the micro-level of specific individual or institutional interactions, at the meso-level of group interactions, or at the macro-level of the history of discursive changes (Fairclough and Kress,1993). From this it follows that CDA attempts to bring together text analysis with contemporary social, political and cultural theory. It involves an examination of force, power and relations in formation within the ever changing 'non –discursive' global processes such as

economic, political and cultural. It is both a method and a standpoint, for what is commonly asserted by its key proponents, is a principled and transparent back and forth shunting between the microanalysis of texts using varied tools of linguistic, semiotic, and literary analysis and the macro analysis of social formations, institutions, and power relations that these texts index and construct (Fairclough,1989; Dijk,1997; Wodak,1996;Gee,1999).

When it comes to text book analysis, CDA takes the form of deconstruction by means of challenging and questioning the already taken for granted meaning of the words. That is the job of a critical realist ontology compatible with critical social theory which according to Maxwell (1990) emphasizes the ways in which social research legitimizes certain questions and policies and delegitimizes others. Moreover, its aim is an emancipator one, for as Lincoln (1990) put it 'the critical realist/critical social theory paradigm (philosophical model, worldview) directly addresses the legitimating functions of social research for some classes of persons while at the same time seeking to empower marginal groups' (p.510). In other words, CDA is viewed to be underpinned by a critical theory paradigm, for it aims to question the stability and fixation of the Saussurian distinction between 'signifier' and the 'signified', between the concepts and object, in order to reveal their fluidity and mediation by social and global forces. It is transformative, for it seeks to deconstruct the objective truth so as to raise emancipatory consciousness. The implication of CDA for cultural portrayals in textbooks is to relate the binary oppositions that will be further explored below, to the wider social and global realm. The next section will reflect the contribution of CDA to text analysis of cultural depictions.

What is 'critical', 'interpretive', and 'objective' about CDA?

This section aims to build on the notion of CDA as was put forward by Van Dijk (1997) by drawing some examples concerning the techniques which are currently being used in textbook analysis in order to show that each technique reflects aspects of the three major paradigms already described in previous sections such as positivism, critical theory and interpretivism. Van Dijk expands the notion of social DA to that of CDA. He sets out to define social DA as the research framework which goes beyond the mere study of discursive internal structures of the text, to include the broader sociocultural structures and processes. He then adopts the term CDA to stress the importance of the critical scholar's political and social position as well as his active participation which seeks to 'uncover, demystify or otherwise challenge dominance with their discourse analyses' (p.22).

What is noteworthy about CDA is that its ultimate goal is not only scientific, but as its pioneers have contended, is also social, political and affiliates other scientific research which deals with change (Fairclough and Wodak,1997). In the case of ethnicity, racial inequality and

cultural depictions research, the role of CDA role is emancipatory in that it intervenes on the side of the dominated and oppressed groups against the dominating ones. From this, it follows that discourse becomes politically and ideologically loaded. Nevertheless, CDA is still as scholarly as any other social research in the sense that it adheres to the standards of a careful, rigorous and systematic analysis.

The epistemological claim that is to be pinned down first is the one which relates to objectivity and is associated with the physical sciences embracing positivism. One of its most salient assumptions concerns the operation of causal relationships; an issue already alluded to in a previous section. The notion of causality in racist or cultural understandings textbook research operates within critical realist ontology. For example the depiction of cultural portrayals in texts can be examined through the lenses of economic change or other global and social processes. The identification of causalities and correlations in the text requires both quantitative and qualitative techniques underpinned by positivism and interpretivism respectively. It is thus at this point where CA and (C)DA overlap. In other words CA delves behind the surface appearance of the words in order to discover their real meaning. Many content analysts share the notion that CA seeks out latent meanings that become evident only from systematic quantitative study. In relation to this, Foucault puts forward an argument according to which the task is envisage:

Relations between statements (even if the author is unaware of them; even if the statements do not have the same author; even if the authors were unaware of each other's existence); relations between groups of statements thus established (even if these groups do not concern the same, or even adjacent fields; even if they do not possess the same formal level; even if they are not the locus of assignable exchanges); relations between statements and groups of statements and events of a quite different kind (technical, economic ,political, social) (Foucault,1979 .p.29).

These cause and effect as well as correlational relationships, when it comes to literary texts, can be examined through particular methods and analytical techniques to deconstruct the traditional hierarchy, which according to Rudd (1999) pays attention only to certain voices while swamping other voices. It is at this point where CDA has the potential to demystify the already taken for granted meaning of some cultural portrayals in order to unravel the suppressed voices of the disempowered which have been viewed and depicted in a stereotypical manner, For, as Foucault (1980) argues, these power relations are not set in concrete other than being continually renegotiated. Power is thus constructed and could only make sense if it is studied within a complex domain of economic processes and the relations of production. In other words power is a complex issue under an ongoing reconsideration involving always a process of

construction and deconstruction. When it comes to textbook analysis all epistemological underpinnings of the three major paradigms are imbricated in each other. Two analytical techniques 'deconstruction' and 'story grammar analysis', will be discussed in the remainder of this paper in order to argue that when these are employed in cultural understandings textbook analysis, the researcher shuttles back and forth between positivism, interpetivism and critical theory as to deconstruct the stereotypical image of the 'other', an effort parallel to the aim of this paper which is to deconstruct the incompatibility thesis.

The first technique which is to be tackled is 'deconstruction', a term drawn from literary theory and structuralism. Critical social researchers commonly ascribe to the term as critical nuance as it takes apart (deconstructs) the abstraction of the taken for granted phenomena in order to reveal the inner relations and thus reconstructs the abstract concept in terms of the social structural relations that inform it (Harvey,1990; Eagleton, 1996).

The structuralist technique of deconstruction centers on the identification of binary oppositions and narrative sequences. The former refers to the polarized representation of characters in a literary text, be it a novel or a poem and carries within it a deeper identification of the 'self 'and the 'other'. Such binary extremes can be represented as good/bad, civilized/primitive, repelling –because – different /compelling-because –strange- and –exotic, etc. The latter refers to what the characters of the literary text actually do. As noted earlier CDA provides research with systematic and critical techniques for analyzing written texts. The use of binary pairs drawn from previous studies legitimizes the criterion of validity according to which the researcher measures what it purports to measure. The systematic aspect of CDA denotes to positivism and the critical aspect implies to critical theory which presupposes interpretivism. The focus now shifts on the contribution of these paradigms for 'binary oppositions' and 'story grammar analyses'.

The first step taken during a textbook analysis on cultural understandings is to predetermine and predefine the binary oppositions drawn from previous research in order to be tested for their occurrence. This process postulates a deductive approach to research, an attribute of positivism. What is worth mentioning about CDA is that it is an 'interdisciplinary approach' (Liu,2005) by means of providing researchers with both quantitative and qualitative methods of research. When it comes to textbook analysis, CDA inevitably develops an argument from the particular to the general by discovering new emerging patterns or identifying new emerging relationships between the already given categories and thus the process becomes inductive which aligns with constructivism/ interpretivism. This argument could be made stronger by drawing an example from a literary textbook analysis conducted by Millas (2006). Based on an East/West dichotomy of representation of the Turk, he generated an

argument according to which the Turks appear as negative personalities whenever they are portrayed as abstract/historical characters and as potentially positive individuals when presented as concrete/experienced persons.

The last issue to be tacked is 'story grammar analysis' which provides CDA a systematic, predictable and controllable way of examining specific patterns. Liu (2005) applies this technique to children's literary textbooks drawing upon the research framework of CDA in order to investigate the ideological forces which are being manifested and whether they serve the interest of the government and its cultural elites or the interest of the child reader. The alignment of the technique to positivism can be figured out by Van Dijk's (1997) perception of it : In the same way as the form of sentence is described in terms of word order (syntax), we may decompose the form of whole texts and talk in to a number of fixed, *conventional components or categories* and formulate rules for their characteristic order (p.12-13).

The above mentioned notion corresponds to the criterion of reliability which is commonly associated to the positivist and physical sciences tradition and it is used to measure the consistency and frequency of certain patterns and key categories throughout the texts under study.

Another aspect of the technique which has positivistic underpinnings is that of causality and corresponds to internal validity. According to Thompson, (1990) stories, be these fictional or based on personal experience, are organized in knowledge structures that can be anticipated by the audience. Liu (2005) develops this argument further as to show that an examination of the theme and orientation of a story along with the syntactic rules used in the story can provide the researcher with a temporal- causal chain of events of a predictable organizational structure so as to uncover patterns of social relations, cultural values and beliefs conveyed in the story. Hence, the aim of the technique becomes critical and emancipatory for it makes apparent whose believes and values have been authorized and whose have been silenced. The 'criticality' which stems from the coalescence of these two techniques is also related to "the prevailing socioeconomic and political structure" (Harvey, 1990). In his critical work of how Europe constructed the stereotypical image of the 'Orient', said (1978) argues that "*Orientalism* is a study based on the rethinking of what had for centuries been believed to be an unbridgeable chasm separating East from West" (p.352). What Said aimed to do in his work was not just to dissipate difference itself but to challenge the very idea of difference which implies hostility and backwardness. Therefore, in order to achieve his aim he went beyond the version of the master-slave binary dialectic and adopted a new way of conceiving the Orient by rethinking and re-formulating historical experiences which had once been based on the geographical separation of people and cultures.

CONCLUSION

This paper has pragmatically argued that CDA provides an appropriate research framework for analyzing textbooks with regard to the identification of cultural depictions. However, the epistemological standpoint taken does not affiliate to a materialist pragmatist epistemology which espouses integration, complementarity and corroboration of diverse research methods. The contention of the paper is that the researcher's epistemological standpoint does determine research but at the same time research should reflect upon all possible epistemological stances. In the case of CDA, the entanglement of philosophy with research methods becomes necessary. CDA when applied to textbook analysis does not only involve an interlocutory role in the dialogues between texts and broader social processes. What this paper has sought to suggest is that the CDA analyst should make all possible kinds of epistemological claims including those that are founded under the positivistic umbrella. Research should be about investigating meaning and significance while at the same time being able to question, predict and control. Future research may well be concerned with the investigation of binary oppositions regarding the images of the Turks in Greek Cypriot history schoolbooks as well as depictions of the Greek Cypriots in their counterpart's history schoolbooks. Overall, venues for future research regarding the use of critical discourse analysis may well be concerned with investigating literature as well as school textbook depictions of all nations and societies in conflict. Therefore, the emancipatory character of the critical discourse ethics technique and methodology is likely to transform not only discriminatory assumptions and methodological biases of research, but also our biased notions of the 'other'.

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