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RESEARCH ARTICLE

THE CENTRAL ARGUMENTS OF CRITICAL REALISM AND POSITIVISM APPROACHES AND AN EVALUATION OF THEIR IMPACT UPON A PROPOSED RESEARCH

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ABSTRACT

This paper performs a comparative analysis of the Positivist and Critical Realist paradigms and investigates the impact of both on a proposed research study. An overview of each philosophy is provided in terms of their origins and applications and the core tenets of each are presented. Positivism and Critical Realism are then analysed collectively in order to highlight the strengths and weaknesses of each research philosophy. The impact of both Positivism and Critical Realism on a proposed research study is addressed with particular reference to how each philosophy would benefit the research outcome. Based on this discussion, the Positivist approach is chosen as the most suitable research philosophy for the present study given the scope and nature of the project and the phenomena being observed.

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INTRODUCTION

This paper will analyse the core principles of both Positivism and Critical Realism, two philosophies that are distinguished by a series of key differences despite sharing the principle of objective truth. This article will begin by offering an overview of each philosophy before performing a critical comparative analysis of both. As two of the most significant research approaches in the scientific field, this article aims to evaluate the core tenets of each philosophy before comparing the strengths and weaknesses of each from an epistemological perspective when performing a research study. Thus, the primary objective is to critically analyse the central arguments of both Positivism and Critical Realism before determining the impact of both on the performance of a research study. Based on the findings, this article will then identify which approach is most suitable given the scope and objectives of the present study.

Positivism

Positivism operates on the assumption that an objective world exists that is independent of observers. As such, positivist research typically focuses on the analysis of evidence that can be directly observed (O'Mahony and Vincent, 2014, p.3).

Within the positivist framework, a number of key elements should be identified, namely logical positivism and empirical positivism (Bryman, 2012, p. 28). Logical positivism operates on deductive principles and generates analytic propositions accordingly (Weinberg, 2013). More specifically, this philosophy perceives the world on two planes, one empirical and one theoretical (ibid.). The former is driven by the principles of verification and falsification, essentially identifying the truth from conjecture, and classifies the world as either scientific or non-scientific (Blaug, 1997, p. 13). The reasoning behind this classification, as highlighted by Popper (2014, p. 54), lies in the identification of an asymmetry between the core tenets of deduction and induction.

In other words, although we may have experienced a specific phenomenon in the past, we cannot guarantee that we will experience the exact same phenomenon in the exact same way in the future. In addition, past experiences should not be relied upon to make future predictions (Blaug, 1997, p.13). Thus, while it is not possible to prove that some things are materially true, it is at least possible to prove that they are false (Blaug, 1997, p.13). From this perspective, the field of science can be perceived as the determination of what theories or hypotheses are false so that fresh hypotheses can be generated that can withstand the falsification process. In effect, the continual falsification and generation of hypotheses represents the gradual pursuit of what is ultimately true. From this standpoint, Popper (2014, p. 54) believes that the performance of

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inductions and generalisations will eventually lead to the creation of new knowledge. Therefore, Positivism can legitimately be defined as the empirical measurement of objective reality.

Critical Realism

Roy Bhaskar is credited with the creation of Critical Realism as a philosophy of science (O'Mahony and Vincent, 2014, p.2; Bhaskar, 1989, pp.1-59). This philosophy defines an objective reality as one that exists independently of individual perception (O'Mahony and Vincent, 2014, p.2). However, Critical Realism also posits that this reality is influenced by subject interpretations (O'Mahony and Vincent, 2014, p.28). From an academic perspective, this philosophy offers a middle ground between what is referred to as the empirical-interpretive dichotomy, a philosophical chasm that exists between the empirical analysis of objective phenomena and the qualitative analysis of social meaning (Bryman, 2012, p. 28). Critical realism offers researchers a framework upon which to choose or organise methodologies as opposed to dictating exactly what processes should be undertaken, a characteristic that distinguishes the philosophy from the more perspective nature of Positivism (Lawson, 2006, p. 7). Therefore, according to O'Mahony and Vincent (2014), using the Critical Realism approach, researchers are offered a theoretical explanation for existence and the social reality and operates on the assumption that some views are more precise than others.

The core tenet of Critical Realism argues that the Positivist philosophy in narrowing in on the relationships between specific variables fails to take the context of social phenomena into consideration. As a result, much of the work generated using this research approach typically describes social phenomena as opposed to explaining it. In effect, the Positivist philosophy addresses the nature of phenomena without addressing their origin (O'Mahony and Vincent, 2014, p.4). However, considering the fluidity and impermanence of the social reality, it is simply impossible to truly isolate all variables in a manner that can facilitate explaining their existence (Bryman, 2012, p.29). In addition, Popper (2014, p.54) argues that obtaining an objective perspective is difficult as there are many ways in which knowledge can be socially interpreted. On the contrary, while Critical Realism does not necessarily reject the notion of objectivism completely, it instead recommends the utilisation of what O'Mahony and Vincent (2014) refer to as 'a stratified system of emergent entities'.

While the existence of some phenomena is irrefutable following extensive periods of research and analysis, there are still innumerable social meanings that society may attach to them. For example, air is undeniably real; however, air also possesses a wide range of properties that can be interpreted or understood in any number of different ways by different people (Lawson, 2013, p.4). As such, a hierarchy of emergent meanings is formed which identifies how reality is justified from an objective standpoint and how it is understood, perceived and theorised by subjective observers. The primary function of Critical Realism thus lies in determining what is objectively real and what is subjectively accepted as truth (O'Mahony and Vincent, 2014, p.9).

A Critical Comparison of the Central Arguments of Positivism and Critical Realism

Based on these overviews of Positivism and Critical Realism as research philosophies, many would understandably assume that the principles of Critical Realism are modified versions of the Positivist tenets, reworked in order to generate a clearer and more cohesive view on knowledge and its nature as inherently imperfect (Lawson, 2013, p.19). Using a stratified ontology, it is no longer necessary to define realities as dichotomous. Thus, it is now possible to isolate the empirical knowledge and distinguish between what is actual and what is real. For instance, Critical Realism justifies the link between abstract economic theory and its application in practice (Rubenstein, 1995, p.12) In other words, Critical Realism allows for the practical explanation of abstract theoretical knowledge, a process that also functions in knowledge falsification.

Predictions made on the basis of economic or social theory tend to be imprecise, primarily because it is impossible to accurately predict social phenomena in the same way as physical sciences (Rubenstein, 1995, p.12). As such, the application of Critical Realism facilitates the determination of to what extent models can be applied in testing methodologies that are inherently imperfect as they attribute human actions to only a select number of causes (Nash, 1950, p.155). From this perspective, the Critical Realist philosophy urges us to acknowledge that the application of such methodologies, though grounded in empirical theory, may generate inaccurate or imperfect results. Thus, they should be perceived as a version of reality as opposed to a complete representation (Rubenstein, 1982, p.98). On the contrary, a researcher working from a Positivist standpoint would argue that these methods generate broad reflections of causality.

That being said, there are also limitations to the Critical Realism philosophy that must be addressed. For example, some would argue that the principles engender a tendency for researchers to 'sit on the fence' when it comes to interpreting the evidence as they are determined to maintain a role of reflexivity in their work while at the same time acknowledging the primarily political nature of research and striving to maintain the illusion of objective reality (Elder-Vass, 2012, p.237). In addition, knowledge exists autonomously from the research study but cannot feasibly be assessed autonomously due to its integration in social activity. Thus, the Critical Realism philosophy advocates the analysis of causal as opposed to taxonomic groups. However, placing emphasis on the analysis of objective evidence that may not be accurately and wholly reflected in the study suggests that the focus is placed primarily on the objective reality as opposed to the subjective interpretation.

As such, inaccurate research is somewhat forgiven for its imprecision as errors are attributed to divergences caused by social differences. It also condones the use of research designs that are based on subjective perceptions regarding correct and suitable practices as well as the subjective interpretation of the findings. As a result, it can be argued that Critical Realism nullifies the meaningfulness of the end result. According to

Elder-Vass (2012, p.238), many researchers who adopt the Critical Realism approach typically denounce critique as 'noise'. In addition, the model has failed to eliminate its focus on causation, instead choosing to expand the scope of the model to incorporate a wider range of causative models. Thus, the philosophy could arguably be viewed as a type of Positivism that has reacted favourably and flexibly to condemnations of its underlying principles and assumptions.

In some respects, the advantages of Positivism are typically demonstrated in how it is applied in practice, which naturally facilitates a critical interpretation of the findings (Bryman, 2012, p.28). However, it is perhaps prejudiced to perceive Positivism as a philosophy that assumes that the objective reality can be measured quickly and easily with very little effort.

In fact, the common assumption that correlation equals causation is not applied by the majority of researchers operating under Positivist principles. The primary goal of Positivism is to indicate the possible causal relationship between two phenomena as opposed to generating valid evidence to cement this relationship as fact. Thus, the main limitation of Positivism lies in the tendency of researchers to use findings to suggest even stronger relationships than the evidence supports. As a result, many researchers using this approach demonstrate a keenness to accept the results as truth despite acknowledging the fact that the evidence could indeed be potentially falsified to indicate otherwise. From many perspectives, Critical Realism provides a more cohesive means of interpreting the findings generated using Positivist practices and the social interpretation of knowledge without disregarding the validity of the Positivist philosophy directly. This is perhaps the fairest and most judicious approach considering the Positivist philosophy has seldom claimed that the empirical measurement of an objective reality could be easily achieved.

The Impact of Critical Realism and Positivism upon a Proposed Research Study

The purpose of the proposed research study is to determine the effect of extensive reading activities on the progress of Saudi University EFL students and their development of EFL oral communication skills. The research study aims to address the two research questions below:

- 1) Do Saudi university students have positive attitudes towards extensive reading activities?
- 2) Can extensive reading activities improve Saudi university students' EFL oral communication?

To complete this study, it is first necessary to determine which research philosophy is more suitable considering the nature and scope of the study and the data that will be subject to analysis. The present study is focused primarily on causative variables. Thus, an empirical approach is most appropriate. However, as Positivism and Critical Realism are both suitable empirical approaches to employ, it is necessary to determine which philosophy better suits the aims and objectives of the study. Measuring the impact of extensive reading activities on the linguistic development of students necessitates that the

analysis be performed from the researcher's perspective. In other words, the research subject will likely be unaware that their oral development is being monitored. Furthermore, as communication requires two-way dialogue, a cohesive feedback mechanism is required to determine if the communication has been successful. As such, the Positivist approach seems appropriate.

However, application of the Critical Realism philosophy would imply that the measurement methods used to monitor the development of students should incorporate triangulation to lower the margin of error and increase the objectivity of the results. Nonetheless, in this case, there are two key research questions which investigate the extent to which Saudi students have a positive attitude towards reading and the extent to which this positive attitude enhances their oral communication skills. These questions do not address the degree or quality of either the students' attitudes or the phenomena being measured and also do not assume that different factors should be analysed using one method as opposed to another. In effect, these research questions can be answered using a number of different measurement mechanisms, thus negating the need to generate more accurate findings by triangulating the results of each method applied.

In this regard, Critical Realism can be understood as more effective in empirical studies where the suitability of measurement methods applied may be subject to doubt. Nevertheless, in this case, a diverse range of criteria will facilitate the satisfaction of the research questions. More specifically, with regard to the first research question, the objective is to determine whether Saudi students have a positive attitude towards reading. Thus, a survey instrument can be used to record the results and there is no need to analyse the responses given any further. As long as the survey is designed effectively, it will accurately reflect the attitudes of the students. In terms of the second research question, the primary goal is to determine to what extent the students achieve a measurement of oral competency as opposed to cross-examining the nature of the measurements applied.

Thus, the main objective is to measure the students' level of competency using a pre-determined set of criteria as opposed to evaluating performance from the perspective of the students. In effect, for both questions, the application of the Critical Realism approach would not provide any valuable benefits to the outcome of the study as issues of realism are not likely to be encountered at any stage of the research process. It is also important to highlight that the Positivist philosophy focuses mainly on quantitative methodologies and data collection methods. As such, it is an effective means of collecting vast amounts of data and facilitates the performance and analysis of studies on a larger scale. Therefore, in this case, it is best to adopt the Positivist approach as the present study is likely to collect and analyse large quantities of quantitative data.

Conclusion

In conclusion, this paper has performed a critical comparison of the Positivist and Critical Realist research models and has investigated the impact of each approach on a proposed research study. While both philosophies offer a wide range of

benefits in the field of empirical research, Critical Realism, a philosophy that was devised in response to the core principles of Positivism, is a reworking of Positivism that accepts and addresses critiques of its application in social research scenarios. Nonetheless, Critical Realism is also characterised by the conflation of several key principles which generate what can be considered a rather abstruse approach to social research. However, despite these weaknesses, the Critical Realist philosophy also promulgates several key tents that are difficult to repudiate. While either approach could be feasibly employed in the present study, the positivist paradigm is deemed more suitable as the phenomena under investigation and the measurement methods employed are relatively unsophisticated. Although both Positivism and Critical Realism have their advantages, the Positivist paradigm is chosen as it is simpler as opposed to superior. More specifically, the Positivist paradigm is far easier to apply as the proposed study is a simple empirical study where the researcher observes the development of the students' oral language skills when they engage in extensive reading activities.

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