In his book Cross Cultural Analysis, Minikov (2013) states, "The relationship between theory and empiricism and the question of which of the two should come first are important issues. Different perspectives have resulted in disagreement, confusion..." (p. 72). Explain the two, or more, sides to the argument of how to study culture and then take a stand on which should come first by giving examples and evidence to support your claim while refuting the other approach.

The relationship between theory and empiricism is straight-forward to the extent that all researchers at least agree both must be present to fully support an argument (Minkov, 2013). The order in which theory and empiricism are applied, however, is where the matter becomes complex and it is an important one because how a study is structured may impact the reliability, validity, and even outcomes, particularly when concerning a field as subjective as cross cultural analysis.

On the one hand, theory may precede empirical analysis. This is also referred to as a deductive approach, wherein the logic follows that if premises are true, then the conclusion must, too, be true (Okasha, 2002). This is a very common approach that puts forth theory and then, based upon that theory, hypotheses can be formed, tested, and inferences can be made about the findings. There are strengths and weaknesses to this approach. Logically, starting from theory provides the researcher with the opportunity to have a premise from which to launch in order to formulate a conclusion. This has formally been argued by Carl Hempel and his "covering law," which essentially posits that the researcher is 'covered' when premises are true and a deductive approach is applied (ibid). In cross cultural analysis, having one theory that explains all possible interactions is unlikely, so at times it is necessary to string multiple theories together in order frame a research question, called the "under-determination argument" (ibid).

Minkov supports the theory-first approach, but argues that it is not always appropriate or necessary and this approach has its flaws. Thomas Kuhn (1996) warns of the theory-ladenness of

data in that the theory used to underlie a research question will be embedded in the construction and later interpretation. In cross-cultural research, bias such as theory-ladenness is important to watch out for. Kuhn posits that the "scientific" approach cannot fully live up to its desired definition because of implicit subjectivity and theory-ladenness of all research endeavors and are subject to context (i.e., the extent to which all of the information needed at the time was available and that no alternative explanations were presented). Thus, within a particular paradigm, one can be as accurate in their findings as that period allows until new information or perspective comes available, which then renders those findings subject to scrutiny (i.e., via revolution).

On the other hand, empiricism may precede theory. This can also be referred to as the inductive approach such that prediction actually follows observation (Okasha, 2002). Minkov advocates for this approach and also puts forth several foundational research studies that conduct large-scale cross-cultural analyses in the absence of theory or hypotheses (Bond, 1987; Hofstede, 1998 in Minkov, 2013). The benefit to this approach is that there is not the issue of theoryladenness previously described and issues of bias that often challenge the researcher can be partially mitigated. However, Minkov warns that statistical analyses can oft be creatively manipulated to yield desirable results. For example, in Hernstein, Richard and Murray's (1994) publication The Bell Curve, historical statistics were summarized to declare racial differences in intelligence. An example of one study was conducted by Robert Yerkes in the early 1900s that concluded the superior intelligence of Whites over Blacks, without controlling for known influential variables such as schooling. Later analysis of the data showed errors and omissions as well as highlighted a bias in the study methodology. Hence, while the data fit and the statistics were significant on paper to support the researchers claim, in essence, the proper model was not tested and lacked insight into the factors that could contribute to the observed difference. This is

where putting empiricism before theory poses a significant challenge to reliability of findings and provides for additional concern over biases introduced. In cultural analysis, as well, values of the researcher can come into play to a significant extent (Hofstede, 1998).

Hume's "problem of induction" is one that challenges the uniformity of nature and says that even if nature has performed uniformly until now, it cannot be assumed that it will be continued (Okasha, 2002). Thus, values of the researcher can impact uniformity in the absence of applying theory to drive the empirical analyses. Hume argues that there is a significant issue with blind faith in induction. The rebuttal to this is the application of inference and the probability of inferences being correct using inductive reasoning (ibid). Thus, Minkov would likely argue that though a deductive approach can be perceived to be air tight if all of the premises and variables are known, this is not always possible, therefore using strong statistical methods and robust research design acts to fill the holes for parts of culture that are unknown or unaccounted for. Similar to Hume, Thomas Kuhn (1996) has put forth an incommensurability thesis that states a new paradigm and old paradigm cannot be compared in the same terms. This suggests that in cross-cultural analysis, commensurate standards of comparison are at risk due to the potential for differences in prevailing paradigms. Minkov tries to address this point by putting forth different studies that come at the same comparison from different perspectives and cross-validation.

Cultural relativism is a theory that supposes there is no such thing as absolute truth (Okasha, 2002). The reason this particular theory is relevant to a review of theory and empiricism is that, when applied to cross-cultural analysis, the implicit relativity can easily confound a study. Philosophically, it is posited that "what is right or good for one individual or society is not right or good for another, even if the situations are similar, meaning not merely that what is thought right or good by one is not thought right or good by another ... but that what is really right or good in

one case is not so in another," (Frankena, 1973). Such relativity challenges the field of cross-cultural study to a significant extent and, inasmuch as the logical positivist would advocate for statistical controls, are real and cannot be ignored. Implicitly, inference that controls for cultural differences acknowledges they exist meaning that no formulated construct can be entirely representative of the underlying concept (Minkov, 2013).

Theory before empiricism is the most air-tight approach to research, while empiricism before theory may serve a broader application, particularly in exploration of cultural analysis. That Minkov begins his argument with the 'theory' of logical positivism casts doubt on the argument that empiricism should precede theory; if an academic does not display that which he purports is reason enough to position in the opposite. However, if further argument is needed, examples are worthwhile. Hofstede (in Minkov, 2013) famously sought to better understand the opinions of IBM employees, as he advanced that while the employees engaged with customers, those opinions could have a significant impact on how they interacted and thus translate into impacts on the company's success. Hofstede purposely did not propose any hypotheses or notions about what would emerge from the data in terms of cultural dimensions. The exploratory analysis leveraged theory in survey design but allowed for analysis to shape the patterns and dimensions subsequently. This study, while it has not been replicated, has been subject to cross-validation and correlation with other studies (in Minkov, 2013). Similarly, the ability to readily validate Hofstede's dimensions have been a challenge (i.e., Merritt, 2000 in Minkov, 2013). Conversely, Schwartz (1994 in Minkov, 2013) published his study of cultural values in which he put forth theory-based hypotheses to precede empirical analysis. Schwartz identified six categories: hierarchy, conservatism, harmony, intellectual harmony, affective autonomy, and mastery. Interestingly, the group of teachers' categories aligned 100% with Hofstede's dimensions, yet few of the student dimensions correlated.

This may point to values differences across cultures based on age. Herein lies the argument for theory before empiricism. If Minkov is correct and the empirical, quantitative approach is the right one to precede theory, then Hofstede's inferences based on sampling and controlling for confounding variables would have come to the same conclusions as Schwartz. This is an important point because the theory before empiricism approach would have included a scan of related variables and included them in analysis. While, granted, the present summary is biased by educational teachings (i.e., most students are taught to revere theory), the logical basis for each approach favors theory before empiricism. That empiricism would ever precede theory leans to an exploratory approach, which does not imply empiricism to begin with; thus, from the start, such an approach is shaky and must be supported by the inferential statistics upon which it rests. When it comes to understanding people and the cultures to which they belong, inference may be a good start but if Minkov's desire for applicability of research to policy is to be achieved, such an approach alone may not be sufficient.

William Frankena, *Ethics*, Prentice-Hall (1973).

Thomas Kuhn, *The Structure of Scientific Revolutions*, Chicago: University of Chicago Press, (1996).

M. Minkov, *Cross-Cultural Analysis: The Science and Art of Comparing the World's Modern Societies and Their Cultures*, SAGE Publications, Inc (2012).

Samir Okasha, *Philosophy of Science: A Very Short Introduction* (New York: Oxford, 2002).