**Positivism and Post-Structuralism:**

**Different Ways to Understand the Elephant**

Stephanie M. Mikulasek

Department of Education, George Mason University

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Dr. Beverly Shaklee

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**Abstract**

This study reviews two contrasting epistemologies: positivism and post-structuralism. After defining each of these epistemologies, this study shows how they appear in practice in quantitative research, which aligns with positivism, and in qualitative research, which is used by post-structuralists. To illustrate the differences, this study considers a research question pertaining to the relationship between global competency and study abroad programs by examining one quantitative study and two qualitative studies. From this analysis, this study uncovers the type of research generated by these two different epistemological approaches and how that research complements and enriches the other. In conclusion, both these ways of knowing are recognized as necessary in research in order to obtain more accurate and holistic information, which is critical when making decisions and taking action.

**Positivism and Post-Structuralism:**

**Different Ways to Understand the Elephant**

Perhaps nothing more defining for an individual is their ontology and epistemology. How do we know what we know? How do we see the world? Responses to these philosophical inquiries affect the questions we ask, how we ask them, and what we accept as legitimate answers. Hence, when conducting studies, researchers must be cognizant of his/her type of questions and approach. To illustrate the varying ways of knowing, this study examines two contrasting epistemologies: post-structuralism and positivism. Post-structuralism posits that meaning is dependent on the individual; all things are relative. Positivism, on the other hand, believes there is a fixed meaning discovered through deductive reasoning and scientific methodologies. These very different epistemologies lead to different types of questions asked, methodological approaches used, and information generated. To illustrate these differences, this study defines these two epistemologies and how they influence the approach of a similar research question. In conclusion, this study seeks to demonstrate not which epistemology is correct, but rather that these ways of knowing are complementary and informative, and give the reader two perspectives of the same elephant.

**Understanding Positivism**

The conceptual development of positivism is credited to Auguste Comte (1798-1857), a French philosopher and sociologist who was born into the turmoil of the French Revolution. As a way to calm the post-revolutionary era of social and political upheaval, Comte believed the reconstruction of order would only be available through the application of the scientific, or “positive,” method to social, political and religious thought. The positive method followed a deductive reasoning process, beginning with a hypothesis, observation of concrete phenomena, and the construction of scientific laws and conclusions (Pickering, 2009); the method also could be inductive as long as the methodological process used what was observable, objective and concrete (Pickering, 2009). By applying a positive or scientific approach to social science, which Comte called “sociology,” Comte believed France would return to a social order based on a reasoned moral and political order.

From this positive methodology grounded in scientific logic and methods, Comte named a new epistemology called “positivism.” In Comte’s thinking, positivism represented the evolution of human development. He proposed a three phase, social evolutionary process with each phase dependent on its antecedent. The first phrase was theological, or pre-Enlightenment, which posited that God and His divine will should be followed without question and under which human beings and human rights were at His mercy; the objective of theology was to explain the cause of phenomena (Pickering, 2009). Another way to describe this phase was progress from paganism to monotheism (Buchanan, 2018).

The second phase was metaphysical, or post-Enlightenment. Here Comte described a period when universal rights of humanity take precedence. Progress moves from monotheism or the supernatural to a search for more secular powers like “the universe” or “nature” (Buchanan, 2018). Aristotle described metaphysics as the philosophy concerned with ontological questions with reasonable ideas that cannot be proven or verified (Philosophy Basics, 2019), or said another way, rather than focus on the cause, phenomena is explored through the construction of abstract entities (Pickering, 2009).

The third and final stage in human progress is positivism, which shifts from looking from a theological cause or a constructed abstract entity to the creation of objective laws (Pickering, 2009). Positivists ask how things work rather than why they exist; in this way, science, or more accurately the scientific method, is used to uncover the universal laws that apply to all cultures, societies, and nations. Universal law is irrefutable and inevitable; Comte called it an abandonment of absolute knowledge, which he saw as a metaphysical exercise, and instead called for allegiance to the scientific method. Scientific explanations, based on observation, experiment, and comparison, are the highest social evolution of a human’s way of knowing. Positivism provides moral order based on reason and scientific knowledge, and individual rights take precedence over the rule of any other.

*Assumptions.* Positivism is a method of organizing human life and harmonizing feeling, reason and activity (Comte, 2015).[[1]](#footnote-1) The positivist ontology is based on a belief that there is an external world and one objective reality that is discoverable through structured, scientific methods (Hudson and Ozanne, 1988). Therefore, an individual’s beliefs, perspectives, and personal experiences are irrelevant to revealing what is real; rather, what is “real” is an objective truth discovered through logic and rational thinking. Such thinking is defined as the capacity and competency to consider variables while accessing, organizing and analyzing the information necessary (such as facts and data) to generate a conclusion (Carson et al, 1988). As such, human action is always preceded by some behavior, which is revealed independent of the researcher.

*Research Methods.* Positivists operationalize research in a tightly controlled, statistically based, and non-emotional manner where the researcher is detached to ensure reason is not confused with feeling. In collecting data, researchers focus on consistency and seek out “time and context free generalizations” (Carson et al, 1988, page citation needed). Positivists focus on distinguishing between fact and value judgements; the goal is objectivity, and the method is rational and logical approaches.

When applying this philosophy to research, positivism is reflected in empirical, quantitative methodological studies. This research method is dependent on the collection of quantitative data, such as numerical data, with an emphasis on the logic of justification and the movement from theory to hypotheses to data to conclusions. Through these deductions, researchers obtain results in a strict, non-value method without attachment to political, cultural, morals, or other factors. Facts are determined through logical processes, detached from feeling.

**Post-Structuralism**

In sharp contract from positivism is the ontological and epistemological perspective of post-structuralism. Like positivism more than a century earlier, post-structuralism grew out of France during another social period of upheaval, the 1960s. Authority, disillusionment, political upheaval and rebellion defined this decade in France, the United States, and much of Europe as citizens challenged traditional values in favor of Marxism, Feminism, phenomenology, and other movements. Post-structuralism was a response to structuralism, a cognitive and behavioral theory which focused on contrasts between structures, which were understood as self-sufficient systems of transformation and self-regulation. These systems reflected the unique culture and linguistics of that culture, but differences were considered superficial as all structures were based on interrelationships (Piaget, 2015). Claude Levi-Strauss was an early scholar of structuralism; his followers, Jacques Derrida, Michel Foucault and Roland Barthes, began critiquing structuralism as too rigid (i.e. too structural) ad that structures were not self-sufficient. These critics viewed cultures and their associated structures as more fluid, contextual, and interdependent on the researcher’s culture and framework. As criticism of structuralism grew, these critics and others later became retroactively labeled as post-structuralists. Consequently, a single individual did not develop post-structuralism, but rather a number of philosophical critics of structuralism (and other epistemologies) have been grouped together into a category called post-structuralism (Dillet, 2017).

*Assumptions.* Post-structuralism argues that how we know is dependent on our specific socio-cultural contexts, histories, language, assumptions, and background. An individual’s particular lens, or framework, defines how, and ultimately what, we know. The poststructuralist view maintains inclusivity of difference, interpretation, and ideas, which is reinforced by the idea human beings are born into a particular culture and context that influence and drive what they understand to be valued, real, and significant.

The ontological foundation of post-structuralism is that reality is relational and developed internal to an individual. Researchers are not distinct and separate from the research; the one assessing the relationship is made up of a particular culture and lens through which he or she interprets the world, which means any text or interpretation of meaning changes depending on the individual. There is no external meaning of the text, as a positivist would say. Instead, there are multiple meanings and interpretations, all of which have meaning and offer a truth. Said another way, the primary meaning is perceived by the reader; a literary text does not have a single meaning, purpose or existence, but rather a variety of multi-faceted meanings. Without a fixed internal truth, a post-structuralist would recognize that the other’s “certainty is as legitimate and valid as our own” (Maturana, 1992). In short, all things are relative and multiple sources must be examined to assess a meaning.

*Research Methods.* Rather than a reliance on quantitative research as required in positivism, post-structuralism uses qualitative research such as narratives, case studies, and phenomenology, or ethnography. Post-structuralists would concur with Stone who posits a baseline number is really just an imagined number with attached meaning by the researcher and the recipient, and far from objective truth (Stone, 1997).

**Comparing Positivism and Post-Structuralism**

A way to understand the difference between positivism and post-structuralism is the information left out in the positivist discussion. For example, a post-structuralist would ask about Comte’s life; how did his experience affect the development of his thinking? For example, Comte was heavily influenced by his mother’s early death, a perceived lack of familial affection, and ultimately a rejection of his family’s Catholicism and political beliefs, and ultimately of God (Pickering, 2009). When Comte developed the three-phased human development progression from theology to metaphysics to positivism, he was framing his personal theological rejection as part of human development.

In addition, not included in the positivist discussion was that Comte began studying under the utopian socialist thinker Henri de Saint-Simon in 1817. As they examined the social malaise from the French Revolution, these two philosophers were searching for a science of human behavior that could overcome that malaise (Pickering, 2009). Comte broke off his relationship with Saint-Simon in 1824, believing Saint-Simon was stealing Comte’s ideas (Pickering, 2009). Soon thereafter, Comte’s manic depression took over, and what was likely a bipolar disorder plagued his 17-year marriage until it dissolved in 1842. During that period, Comte, surviving on the charity of friends and colleagues, began publishing his “Course of Positive Philosophy” in 1830, which took a dozen years to complete (Philosophy of Basics, 2020). Three years later, Comte began a deeply emotional yet platonic relationship with another woman, who tragically died a year later but remained his lifetime muse and rai·son d'ê·tre (Pickering, 2009).

Her death sent Comte into another deep depression, during which Comte conceived of a controversial “religion of humanity,” which his contemporary and once admirer John Stuart Mill considered a break from the scientific objective of positivism (Pickering, 2009). In 1849, Comte founded the Positivist Society and his publications continued, which included the concept of a secular religion with positivists philosophers as the spiritual authority. While his society and work have become institutionalized in the philosophical canon, Comte died penniless in 1857.

For a post-structuralist, this biographical summary, which outlines Comte’s life experiences and personal background, is critical information to understand his epistemology, which is considered relative and part of a specific historical lens. A post-structuralist looks at the contextual phenomenon of a unique experience; Comte’s epistemology developed during a particular time in history within a particular culture, and is relative to that time period. In the positivist discussion, Comte’s personal background may be interesting, but is not perceived as relevant; rather, a positivist is looking at the rationality and logic of the epistemology proposed.

In summary, the following chart outlines the differences between positivism and post-structuralism:

|  |  |
| --- | --- |
| **Positivism** | **Post-Structuralism** |
|  |  |
| An external world is knowable through observation, experience and experiment | All things are relative and subjective |
| One objective reality is discoverable through structured, scientific methods | To understand a phenomena, one must study the object/idea as well as the system of knowledge that produced it |
| What is “real” is an objective truth discovered through logic and rational thinking | Context is just as important as the idea itself |
| Distinguish between fact and value judgments | Phenomenology must be combined with historical context and culture |
| Quantitative, empirical approach to research | There is no fixed or external truth |
| Reliability and congruency of information is critical | The researcher and the subject each influence the phenomena |

**Epistemologies Applied to Research**

To illustrate the difference in how these two epistemologies approach and inform research, this study examines how researchers, each holding a different epistemological foundation, approach a similar research question. The research studies below explore the question of how study abroad programs might increase global citizenship among university students. The first section demonstrates the positivist approach; the study uses a quantitative analysis to determine the development of global citizenship based on objective, verifiable information. The second section demonstrates the post-structuralist approach; two studies are highlighted, each of which use a qualitative approach focused on gathering information from a unique experience and context. Both the quantitative and qualitative examples provide information and perspectives on the same topic, and in the process elucidate the application of a positivist and a post-structuralist approach to research.

**A Positivist Approach to Research**

In 2009, a group of researchers looked broadly at the impact of study abroad experiences on global citizenship in a study sponsored by the U.S. Department of Education (Paige, Fry, Stallman, Josic, & Jon, 2009). This study was a 50-year, longitudinal study (1960 to 2010) examining the long-term impact on undergraduate students who studied abroad, including their continued local and international engagement, career choices and ambitions, and educational achievement (Paige, et al 2009). The research focused on two questions:

“*What is the near-term (1-5 years post study abroad) and long-term (6+ years post study abroad) impact of study abroad on alumni’s global engagement contributions, professional development, and personal development, as perceived by the alumni themselves and as assessed by external measures?”* (Paige et al, 2007, p. 3).

In the quantitative section of this study, the researchers used a retrospective tracer study methodology, that is, they looked back and traced the responses of participants, with a sequential mixed methods research design. Their quantitative instrument was a single, cross-sectional, online survey instrument distributed to participants (Paige et al, 2007), who volunteered after being identified as a study abroad participant within the past 50 years by their program’s institution. To execute the study, the researchers also obtained demographic variables (gender, age, socioeconomic status, ethnicity, and prior intercultural/international experience) and four study abroad program variables (program genre, destination of the program, duration, and U.S. institutional classification).

In order to conduct their research, Paige et al. (2007) developed a measuring instrument called the Global Engagement Survey (GES). This 56-question survey assessed five dimensions using a 1-5 Likert Scale to assess the impact of an individual’s study abroad experience on their future global engagement, an integral part of global citizenship (Morais & Ogden, 2011). The GES measured five dimensions: civic engagement, knowledge production, philanthropy, social entrepreneurship, and voluntary simplicity. A sample of proxies used were participants’ career choices and ambitions, gender gaps, and educational achievement (Paige et al, 2009).

The researchers received responses from 6,391 participants, which was a 29.6 percent response rate from the total sample. Disaggregated by gender, females made up 67.1 percent of the sample and males made up 32.9 percent.[[2]](#footnote-2)

The study showed a clear correlation between increased and continuing global engagement after participation in a study abroad program. Key results from this study revealed 83.5 percent of participants reported their study abroad experience had a “strong impact” on their ongoing global engagement, and another 14.9 percent indicated at least “some impact,” meaning 98.4 percent of participants said their study abroad experience increased their future global engagement, which influenced forthcoming professional and personal endeavors (Paige et al., 2007). In addition, 73.8 percent noted a strong impact on their friendships and student-peer interactions, and 96.3 percent reported their study abroad program had an impact on the undergraduate and graduate coursework they chose after completing the program. Summarily, this study demonstrated that study abroad programs were one of the most influential experiences undertaken during undergraduate education and that they continue to influence participants’ global engagement and career choices.

This data-driven, quantitative analysis exemplifies a positivist approach. The researchers used an objective tool and maintained distance from the participants. Questions were standardized and structured, and the study could be repeated with other study abroad participants. Another way to see this approach is that the researchers were seeking an external reality based on a non-emotional, logical and empirical methodology. Given the subject is an experiential learning program, which may be considered not necessarily an objective experience, these researchers assumed verifiable and objective information was available, and used this quantitative approach to obtain their information.

**A Post-Structuralist Approach to Research**

The next section considers the same question, the relationship between study abroad programs and building global competency, through qualitative studies based on a post-structuralist approach. Two studies are briefly explained to exemplify the type of information gathered from a post-structuralist epistemology and the corresponding qualitative research approach.

*Study One.* To determine the development of global competency through study abroad programs, Cunningham (2019) conducted an ethnographic study on teacher candidates (currently enrolled in a teacher licensure program) participating in an international student teaching program in Mexico. In her study, she focused on two questions: how did immersion programs for pre-service teachers increase their capacity of “cultural noticing,” that is, the ability to notice details about a cultural context; and what were the teachers’ ability to respond to the cultural context, which she defined as the cultural practices, values and behaviors of individuals at a particular place and time (Cunningham, 2019). By increasing cultural noticing and responding to a cultural context, Cunningham (2019) argued that future teachers can be better equipped to use their student’s cultural framework and understanding to develop effective teaching methods.

The results from Cunningham’s study revealed that pre-service teachers did increase their global competencies of cultural noticing and responding to cultural contexts, but do not always use available opportunities to engage in cultural responding. Reasons proposed as to why pre-service teaches did not culturally respond may be due to factors such as race, gender, previous international experience, and/or social identity of the participants (Cunningham, 2019). Cunningham (2019) notes that additional research is needed to determine how to prepare students prior to an immersion experience, and what demographic factors and previous exposure to different cultures may impact a participant’s success in developing global competency after a study abroad program.

*Study Two.* In a separate study, Ramirez (2013) also conducted a qualitative study to assess the development of global competency following a study abroad program. The methodological approach of her research study consisted of autoethnography, decolonizing research and participant observation. Autoethnography is a type of ethnographic approach, which is writing about the culture, attitudes, norms, practices, and language of another; in the case of an autoethnographic approach, the researcher focuses on him or herself. A decolonizing research methodology is an approach focused on incorporating local knowledge and experience of often marginalized groups, which is considered as equally as valid as that of traditional, Eurocentric research methods. Participant observation means participating in a group while studying the group.

Each of these qualitative approaches used by Ramirez valued the participants’ perspectives and the researcher’s perspective. Self-awareness of emotions, background and culture was an integral part of her research study. In addition, this study incorporated “impressionist tales,” that is, individualized narratives of notable incidents relevant to the research, which Ramirez used to capture the nuance of experience (Ramirez, 2013; Van Maanan, 2011). By using these three qualitative approaches, Ramirez (2013) argued that the subordinated accounts of marginalized groups were “liberated” from the privileged accounts of dominant groups, and consequently she could illuminate different types of experiences.

Ramirez used informal interviews, participant observation, personal reflection, and frequent, in-person dialogue to secure trust and informal consent from her participants (2013). The results from her study were narrative vignettes on four topics: Globalization; Training Session; Mexican night; and Barbeque. From these narratives, she highlighted the risk of “artificiality” in study abroad programs (2013). To be effective and build global competency, her research study suggests study abroad programs require authentic engagement with local cultures; historical knowledge; understanding power relations; and the need for positive models for international engagement (Ramirez, 2013).

*Summary.* Both Cunningham and Ramirez use a post-structuralist approach in their qualitative studies. The culture, histories, language, assumptions, and background were integral aspects of the research as well as the individual experiences of the participants and researchers. The research here is not focused on generating fixed or static data, but rather a recognition of the fluidity and validity of different experiences in response to study abroad programs. The study is highly interpretative and offers several factors to consider when conceptualizing future study abroad programs.

**Discussion**

Both of these research studies considered the impact of study abroad programs. In both cases, students developed and maintained a more “global” view after participating in a study abroad program. The nuances within that global view differed, but the united conclusion was study abroad programs benefit students’ global competency. However, while the overall conclusion that study abroad programs are effective is the same, the information collected is markedly different between the post-structuralist and positivist approaches.

For the post-structuralists, information collected revealed a challenge in applying learned information; participants in Cunningham’s study may have noticed the cultural differences, but had trouble responding to those differences. She also noted the challenge of preparing for a study abroad program, and the potential influence of such preparation on the participants’ experience. In addition, she recognized that demographic factors influence the experience of participants, and that more research is needed to study the experiences of participants of different genders, race, and ethnicities. Ramirez uncovered the need for authentic engagement in a study abroad experience. She discussed the power dynamics within a study abroad program and how those dynamics may affect participants. Related, she noted the importance of role models who exhibit the traits of global citizens as integral to an effective study abroad experience. In addition, she showed the importance of historical knowledge when participating in a study abroad program. Summarily, both of these qualitative studies offered a comprehensive view of the transformation and realizations that develop following a study abroad program.

For the positivists, data from the longitudinal, quantitative study noted that the nearly 6,400 participants who responded to the survey unequivocally named their study abroad experience as having at least some influence in all domains questioned on the survey. Information collected clearly indicated that a significant percentage (98.4 percent) of past study abroad participants credit their experience as having a significant impact on their personal and professional choices in life. These choices included career ambitions, a simpler lifestyle, peer-to-peer friendships, knowledge production, philanthropy and civic engagement, among others. A clear understanding of five different dimensions were analyzed, each of which articulated the extent to which past participants collectively experienced influence from the study abroad experience.

One way to understand the different types of information collected is to review the types of questions a positivist or post-structuralist may ask. The following chart shows the type of research questions likely considered in the respective studies discussed above:

|  |  |
| --- | --- |
| **Positivist Questions** | **Post-Structuralist Questions** |
|  |  |
| How are those words consistent with that action? | What is their culture and background? |
| What data supports that conclusion? | How did that experience affect them? |
| What hypothesis were you measuring? | What do their stories tell us about the community? |
| How is that evidence logical? | How does my background influence my listening? |
| What are the facts? | How do they interpret the truth? |

Both the positivist and post-structuralist epistemologies, expressed through these quantitative and qualitative examples, convey information toward a common research question.

The key is that both types of information are necessary to assess the topic. Just as the eastern parable of the blind men each touching a side of the elephant and claiming to “know” the elephant by its tusk or ear or tail, research on a topic needs both the data and the narrative.

**Concluding Thoughts**

As someone who relies on experience, background, unique frameworks, and cultural lens to inform how to approach research, I hold that human nature is elastic, by which I mean our inherently human flexibility and adaptability to coordinate and be in relation with another. We know ourselves as we come to know another. At the same time, this post-structuralist view does not have to reject the positivist view that verifiable, objective and empirical facts exist. Both epistemologies are valid. Rather than focus on which epistemology is “right,” we should consider how each informs and enriches our knowledge and understanding. In the examples presented in this study, both positivism and post-structuralism provided unique sets of data that will inform future study abroad program development and lessons in building global competency. In addition, epistemologies are learned and then adopted, which means we can absorb and shift to aspects of other and new ways of knowing. Comte, Claude Levi-Strauss, Jacques Derrida, Michel Foucault and others, including ourselves, choose epistemologies and research methods based on particular ontologies– but this is just a choice. In other words, we have the capacity to shift our view and adopt other ways of knowing, which is important as new challenges and different types of research questions arise. Finally, this study illustrates that a single research study should never be used as a sole source of information. Each set of data offered a different view of the elephant – and both are needed in order to make sustainable change and inform practice.

Feedback to Learner 8/9/20 1:35 PM

Well done Stephanie, clear, well organized and offered strong examples to support your interpretation. A few APA issues as noted.

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1. Interestingly, Comte created the religion of positivism, including a high priest (which he named himself), dogmas, catechisms, and other recognizable terms from Catholicism. This religion was largely rejected by his followers and subsequent adherents to his core philosophy of positivism. [↑](#footnote-ref-1)
2. According to data offered by the Institute of International Studies during the time period of this study, females made up 65 percent of study abroad participants (Inside Higher Ed, 2020), thereby validating the higher percentage of females participating in the study. [↑](#footnote-ref-2)