

# The Misconstruction of Positivism: From Consumer Research to Technical Communication

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In his article, "Positivism and Paradigm Dominance in Consumer Research: Toward Critical Pluralism and Rapprochement," Shelby D. Hunt acknowledges the assistance of Michael E. Levin of the department of philosophy, City College, City University of New York. His acknowledgement is a refreshing sign that an author has attempted to establish an authoritative and external approval of a non-philosophical perspective of positivism. Hunt provides a compelling argument for the claim that the ongoing debate over the philosophical and methodological foundations of consumer research and contemporary social science involves "misconceptions, misunderstandings, misrepresentations, and mischaracterizations" over the nature of positivism (32). His historical analysis and argument focus on the origins of the fundamental beliefs of positivists and pose a challenge for critics who define positivism in a way that favors their own doctrines. However, Hunt assures us that his purpose is "to clarify issues, not to conquer opponents."

The main points of this essay are to a) explain and revitalize the impact of Hunt's argument, b) analyze a set of articles that reflect how technical communicators understand positivism, and c) show how these articles exhibit misconstructions of the positivist doctrine that either parallel those in consumer research or are different than those that Hunt clarifies. The foregoing agenda rest on the efforts of Hunt and the writings of key positivists.

## Strawman Positivists in Consumer Research and Contemporary Social Science

Hunt divides the misconceptions of positivism into three categories: causality, the machine metaphor, and the nature of reality. Beginning with causality, he points out that "the consumer research literature claims that the search for causal relations or causal explanations figures prominently in 'positivistic social science'" (33). According to the authors that he cites, positivism is characterized as a "metaphysic" that segregates the elements of reality into causes and effects and places a "high priority on identifying causal linkages" (33). Positivists supposedly argue that "science should uncover causal laws" with the axiomatic assumption that "real causes" exist (33) and that there is a "single causal reality" (34).

The idea of causality that critics attribute to positivism is not the everyday and uncontroversial understanding of causation. With the common usage of *cause*, all we mean is an event that precedes and accounts for the occurrence of another event. For example, we might say that the movement and impact of a cue ball is the cause of the movement of another billiard ball. When we construct causal statements like we do not suggest anything remarkably profound or abstract. According to this common usage, a cause is really just an observable event or collection of observable events. In contrast, the type of causation that critics associate with positivism is an abstract and idealistic concept that has controversial, metaphysical and epistemological implications. In other words, a *cause* in this ethereal sense is an event or entity that can not be observed, yet somehow provides an ultimate explanation of reality. Metaphysical causes are not unobservable just because we cannot observe them; rather it is logically impossible to observe them because they have no observable characteristics. If this explanation

of causation seems unintelligible or difficult to readers, then they would likely be on the more down-to-earth side of the positivists.

Hunt argues that the way consumer researchers portray the positivist view of causality is historically false. He states that "any research guided by positivism would necessarily *avoid* both the assumption of causality, and the search for 'real causes'" (34). He supports this claim by appealing to philosophers, notably Hempel and Hume, who express views on causality that are consistent with the positivist program. These positivist sources suggest that scientific explanation is nothing more than prediction and not identifying underlying pseudo-causes that are labeled as metaphysical entities.

The appeal to Hume provides an especially incisive refutation of consumer researchers' perspective of positivism. His works serve as a historical foundation for positivist thought and the gist of his ideas pervades most positivist literature. Hunt correctly points out that "the positivists rejected causality because they viewed 'cause' as an unobservable, metaphysical concept that violated their Humean skepticism" (34). Hume argues that just because one event follows another does not mean that the former causes the latter. (His famous example states that just because the sun has always risen in the past does not mean that we know for certain that it will continue to rise in the future.) The idea of causation that critics would like to associate with positivism is a metaphysical concept that implies a necessary connection between causes and effects. This necessary connection runs contrary to the skeptical positivist disposition. There are no real causes, causal laws, or a single causal reality according to the positivist perspective. There are only observable events that are used to predict when or how often other events will occur.

Researchers must not underestimate how Humean skepticism has influenced positivism. To further support Hunt's case, consider this famous passage from Hume's *Enquiry Concerning*

*Human Understanding*:

When we run over libraries, persuaded of these principles, what havoc must we make? If we take in our hand any volume; of divinity or school metaphysics, for instance; let us ask, *Does it contain any abstract reasoning concerning quantity or number?* No. *Does it contain any experimental reasoning concerning matter of fact and existence?* No. Commit it then to the flames: for it can contain nothing but sophistry and illusion (XII, iii).

A. J. Ayer, in his infamous and controversial book, *Logical Positivism*, states that the above passage "is an excellent statement of the positivists' position" (10). Hume basically describes how positivists divide meaningful statements into linguistic tautologies and empirical statements. (This division is sometimes referred to as *Hume's Fork*.) Examples of linguistic tautologies are statements like  $8 + 2 = 10$  or *All bachelors are unmarried men*. Tautologies are undoubtedly true, but they relate no factual information. Empirical statements, in contrast, are those that can be verified or confirmed by sense perception (i.e., one of our five senses). Neither linguistic tautologies nor empirical statements supply us with knowledge of ultimate causes or an unobservable causal reality. Hence, the Humean roots of positivism provide a reasonable case for us to disassociate positivism with a metaphysical view of causation and reality.

The second misconception about positivist science involves what Hunt calls the "determinism and the machine metaphor." This amounts to the belief that "such a science would necessarily be deterministic, machine-like, or mechanistic" (34). Consumer research critics consider this belief to be compatible with Descartes' mechanistic world view, according to which, "reality is perceived as a machine-like event determined by forces and constraints" (qtd. Hunt 34). According to mechanistic determinism, the universe is like a clock whose every event is determined by a cause. Consequently, every event is predictable from the beginning of time.

Even the blink of a person's eyelashes is a necessary consequence of a prior chain of events that we are unable to break or change.

The deterministic and mechanistic view is also associated with mechanistic materialism. In order for determinism to make sense, events and entities must be material or physical.

According to mechanistic materialism, the universe is reduced to the interaction of material entities in absolute space and time. Critics combine mechanistic determinism and materialism and attribute them both to the positivist doctrine.

Hunt's refutation of this second misconception of positivism is straightforward. The positivists were active during a period when quantum theory was gaining momentum as the new paradigm for physical science. Since they were primarily German mathematicians and physicists that were practicing in their fields, they were also fully aware that quantum theory was incompatible with mechanistic determinism and materialism. Hence, they would not have subscribed to an old and problematic scientific view because they were well equipped to adapt to quantum theory. Hunt further states that "a primary objective of the Vienna Circle [the logical positivists] was to develop an alternative to such a view" (34). Hans Reichenbach, a leading member of the Berlin school of logical positivism, expresses this alternative view in simple language:

The picture of scientific method drafted by modern philosophy is very different from traditional conceptions. Gone is the ideal of a universe whose course follows strict rules, a predetermined cosmos that unwinds itself like an unwinding clock. Gone is the ideal of the scientist who knows the absolute truth. The happenings of nature are like rolling dice rather than like revolving stars; they are controlled by probability laws, not by causality, and the scientist resembles a gambler more than a prophet (*The Rise of Scientific Philosophy* 248).

It is hard to deny the implications of the above passage. Writers must consider the complete historical context that surrounds positivism before they associate it with determinism and materialism. Hunt's well-researched ideas on positivism, in conjunction with the insight of

Reichenbach, demonstrate that a deterministic, mechanistic, and materialistic worldview presupposes an underlying and unobservable reality of causes and physical objects that are rejected by positivists.

The third misconception centers on the nature of reality. Hunt reveals a very surprising claim made by Hudson and Ozanne. They state that "the positivists tend to take a *realist* [italics added] position and assume that a single, objective reality exists independently of what individuals perceive..." (35).

Hunt uses the positivist link to Humean skepticism to refute the misconception regarding realism. An objective reality that exists independently of the mind is an unobservable reality (observation is here considered a function of the mind, so a mind-independent reality would naturally be impossible to observe). He suggests, "the positivists, guided by the views of Mach and Hume, viewed unobservables as metaphysical concepts to be strictly avoided" and "many philosophers of science actually use positivism's opposition to realism as its major *defining characteristic*" (35).

The misconception about realism is actually quite incredible when we consider the abundance of anti-realist arguments and sentiments in positivist literature. For instance, in *Language, Truth and Logic*, Ayer uses an entire nine-page section to explain the meaningless debate between realism and idealism (138-146). Realists assert that there is an objective and physical world that exists "out there" and is independent of our thoughts and perceptions. According to this view, our sense perceptions (i.e., sense-data) are caused by the external and unobservable world.

Idealism, in direct contrast, suggests that our perceptions are the only things that exist. If something is not perceived, then it does not exist. Positivists argue that both realism and

idealism are meaningless because it is impossible, even in principle, to associate any empirical content to either viewpoint. Consequently, both views are incomprehensible and amount to metaphysical poetry. According to the positivist standpoint, when philosophers talk about idealism and realism, and readers find it hard to understand these doctrines, it is not because they are intellectually deficient in any way. The problem is that these doctrines are incomprehensible no matter how they are presented.

Reichenbach and Moritz Schlick, the founder of positivism, add further criticisms of realism. Reichenbach describes how integrating the human mind into the physical world is an essential characteristic of an empiricist philosophy. He criticizes the transcendental conception of knowledge, a view that "makes a cut between physical reality and the human mind and thus arrives at unsolvable problems (269). Schlick writes:

It is, indeed, the case that the use of the words "independent existence," "transcendental reality," etc., is simply and only the expression of a feeling, of a psychological attitude of the speaker (this, moreover, may, in the final analysis, be true of all metaphysical propositions.) If someone assures us that there is a real external world in the trans-empirical sense of the word, he of course believes himself to have communicated some truth about the world. But in actual fact, his words express something very different; they merely express certain feelings which give rise to various linguistic and other reactions on his part ("Positivism and Realism," *Logical Positivism* Ayer 105).

The external world that Schlick mentions is not the everyday world of sensory observation; it is a metaphysical reality that is impossible, even in principle, to observe by means of sensory perception. This is the external world that critics accuse positivists of advocating. However, given the actual positivist view of realism, it is apparent that the criticism is in error.

In summary, Hunt's argument, along with the additional information provided by positivists, shows that positivists do not advocate metaphysical causality, mechanistic determinism, materialism, and realism. They reject these views because of their strict adherence to David

Hume's empirical skepticism. Hunt concludes that "the entire debate has a demonstrably false underlying premise" and that "contemporary social science and consumer research are neither motivated by the 'positivistic metaphysic' nor, most assuredly, 'dominated by logical positivism'" (39).

## **Strawman Positivists in Technical Communication Literature**

Many technical communicators share assumptions about the nature of positivism and how it has influenced their discipline. This section of the essay argues that these shared assumptions parallel the misrepresentations of positivism that occur in consumer research.

Carolyn Miller's essay, "A Humanistic Rationale for Technical Writing," remains a highly influential and frequently cited source that defines technical communicators' view of positivism. Miller describes positivism with the "windowpane theory" of language, namely "the notion that language provides a view out onto the real world" (611-612). To adequately determine whether Miller has correctly applied the windowpane theory to positivism, we must first determine what she means by the *real world*. Second, we must determine what it takes to provide a view of this world according to the windowpane theory.

Miller reveals her windowpane depiction of the real world when she suggests that the positivist view of science "presupposes a mechanistic and materialistic reality" (612). Does she correctly apply this worldview to positivism? According to Hunt's historical analysis and the viewpoints of positivists, she has inaccurately described positivism. The positivists reject this worldview because it implies metaphysical foundations. However, what do Miller's sources have to say about positivism as a mechanistic and materialistic philosophy?

To start, Miller cites Fredrick Suppe's account of positivism, as presented in his *The Structure of Scientific Theories*. She appeals to his analysis as support for her claims against positivism. However, if we examine the pages that she cites, it is clear that his complete analysis ironically turns on her conception of positivism. He claims that "between 1850 and 1880 German science was dominated by *mechanistic materialism* which was a blend of Comptean positivism, materialism, and mechanism" (8). He does not suggest, however, that positivism is inherently mechanistic or materialistic. Comptean positivism also fails to represent positivism as we know it today. The latest version of positivism combines the perspectives of Hume, Earnst Mach, and the Vienna Circle (*Logical Positivism*, Ayer 4-28). Therefore, Suppe's mention of Comptean positivism, mechanism, and materialism in the same context does not imply that positivism is a mechanistic and materialistic philosophy. As already indicated in the previous section of this essay, this assumption contradicts the Humean roots of the doctrine.

A closer look at Suppe's analysis supports the chasm between positivism and mechanistic materialism. He states that mechanistic materialism was eventually replaced by neo-Kantian philosophy of science, which was "adopted in reaction against mechanistic materialism" (9). He further explains that Mach, one of the original positivists, subscribed to the neo-Kantian view at first. This is the first point against the mechanistic and materialistic conception of positivism. Furthermore, Mach eventually advocated neo-positivism, which is twice removed from the mechanistic and materialistic philosophy (9-10) because it rejects the metaphysical foundations of materialism.

The fact that Suppe mentions mechanism and materialism in the same context as Comptean positivism and Machian neo-positivism does not support Miller's claim that positivism is mechanistic and materialistic. She has used Suppe's comments about positivism out of context.

If we grant the possibility that the foregoing criticism of Miller's view is in error and that Suppe's analysis does imply that positivism is mechanistic and deterministic, there is still the charge that his analysis contradicts the Humean roots of positivism. Given any alternative, the argument that positivism is mechanistic and deterministic is spurious.

Miller also cites Barry Brummett's article, "Some Implications of 'Process' or 'Intersubjectivity': Postmodern Rhetoric." He discusses the traditional, Newtonian, mechanistic philosophy of science and counters it with a view that is based on process or intersubjectivity. Since he does not argue that positivism is congruent with the Newtonian, mechanistic philosophy, we must assume that Miller's appeal to Brummett is an extension of her misrepresentation of Suppe's historical analysis of positivism.

We can justifiably say that Miller's association of the windowpane theory with positivism fails on account of her portrayal of positivism as a mechanistic and materialistic philosophy; and this parallels the invalid machine metaphor depiction of positivism by consumer researchers. This shows that what she thinks that the positivists view through windowpane is not the same as what positivists would actually profess to view through the windowpane (if positivists actually used such a metaphor). In other words, Miller does not provide an adequate account of the function of language for positivists.

The next issue is to address Miller's description of how positivists supposedly view reality through the windowpane. In other words, how do positivists use language to express and infer their perspective of the real world? She makes two claims that answer this question. First, proven knowledge is "that process of demonstration, proceeding in Cartesian fashion by logical deduction from the self-evident." Second, "in this epistemology...conclusions follow necessarily from the data of observations and the procedure of logic" (612-613).

It is not difficult to falsify Miller's conception of how positivists derive knowledge. Demonstration in "Cartesian fashion" is a *rationalistic* method of knowledge acquisition. Rationalists like Descartes argued that reason or the mind alone can acquire knowledge of the world; and this knowledge is absolutely certain. In other words, they argued that without any use of our five senses we could infer conclusions about the factual world that are impossible to doubt.

Rationalistic deduction, which derives conclusions with necessity and logical certainty, stands in direct contrast to induction, which derives only *probable* conclusions. There is no characteristic of logical necessity implied by an inductive inference. A cursory survey of the history of philosophy shows that empiricists, like the positivists and David Hume, argued vehemently against the rationalists. Hume's works by themselves are populated with derogative and facetious remarks about rationalists and their viewpoints. It would be heresy for empiricists or positivists to foster a rationalist view of knowledge acquisition because they believe that all knowledge must rest on empirical grounds.

Ayer clearly explains the positivist aversion to Cartesian rationalism. He writes, ". . .the fundamental tenet of rationalism is that thought is an independent source of knowledge, and is moreover a more trustworthy source of knowledge than experience . . .we shall be making good the empiricist notion that there are no 'truths of reason' which refer to matters of fact" (*Language, Truth and Logic* 73). The only necessary and deductive inferences that the positivists allow are tautologies, such as those expressed in mathematics and symbolic logic. However, no positivist would suggest that a tautology expresses anything factual, especially anything about a mechanistic and deterministic reality. Hence, Miller's claim that positivists derive knowledge of the world that is deductive and necessarily certain is historically inaccurate.

Three articles take Miller's misguided conception of positivism as gospel and do not test her claims for historical accuracy. In "Positivists, Postmodernists, Aristotelians, and the Challenger Disaster," Walzer and Gross suggest, "Positivism naively premises a reality somehow understood as separate from human cognition that could be apprehended directly if the safeguards the scientific method provides against subjectivity and prejudice, politics and rhetoric, were ignored" (420). Their claim is consistent with Miller's unwarranted accusation that, for positivists, "facts are self-evident entities existing *out there* [italics added] in the real world" (612). Positivists do not subscribe to the belief that there is a mind-independent reality in any way or form because this is the thesis of realism.

Walzer and Gross claim that "from the positivists' perspective, appeal to universal reason should have brought about agreement that safety was to be the ruling value" (431) prior to the Challenger disaster. This fosters Miller's rationalistic interpretation of positivism. However, we have established already that positivists are far removed from rationalists and do not appeal to "universal reason" to gain knowledge.

Mary B. Coney, in "Technical Communication Theory: An Overview," also appeals to Miller's interpretation of positivism. Coney suggests that positivism is the "belief in the existence of a reality separate from human perception and emotion" (qtd. Staples and Ornatowski 8). She then goes on to elaborate upon the windowpane theory. Coney merely continues to propagate the myth that positivists are realists. In the same book, edited by Staples and Ornatowski, Linda M. LaDuc also appeals to Miller and claims that Western positivist science "has long relied" on the windowpane theory of language, as if Miller had revealed a historical statement of fact about positivism (120).

We can assert now that the windowpane theory is no more than a strawman account of positivist beliefs. It incorrectly associates positivists with determinism, mechanism, rationalism, and realism.

## **Conclusion**

Hunt provides a very persuasive argument against consumer researchers' interpretation of positivism. His historical analysis suggests that they have inaccurately defined positivism as a metaphysical worldview. In short, the mistake is to assume that positivists advocate mechanistic determinism and materialism, a metaphysical view of causality, and a sharp metaphysical division between the external world and the human mind.

Miller, as well as other technical communicators who have cited her research and evaluation of positivism, make a similar mistake when they use the "windowpane theory" to explain the doctrine. Miller also adds to the list of consumer research misunderstandings of positivism when she describes positivists as if they were rationalists who claim to acquire absolutely certain knowledge of the external world and by means of pure reason.

Despite Miller's misconstruction of positivism, her essay deserves merit on several accounts. For one, she successfully reveals the rhetorical nature of technical communication, according to which language is not overtly transparent with a precise and immutable relationship with facts. Human beings are inextricably tied to the process of creating facts and using them to make inferences about the world, inferences that require a significant degree of social acceptance. Second, aside from the questionable relationship between her premises and the nature of positivism, her argument is still valid. If indeed there is a doctrine of thought that argues for an objective, rationalistic, and mechanistic perspective or language, then Miller has

successfully demonstrated that technical writing does not work according to the principles of this doctrine. Miller would have been pleased to know that the positivists rejected the same doctrine that she criticizes for dehumanizing technical writing.

From a logical and practical point of view, Miller has provided a refreshing and productive perspective of technical communication. This essay has only shown that the doctrine that Miller construes as rationalistic, objective, and mechanistic is *not* positivism. If she had replaced every instance of the term *positivism* with something like *linguistic rationalism*, *scientific rationalism*, or something of this nature, then her argument would have turned out virtually flawless and thus immune to the criticisms that Hunt raises against consumer researchers idea of positivism.

Moreover, the best way for technical communicators not to misrepresent positivism is to read excerpts from the primary works of positivists. This will allow them to become familiar with the historical significance and relationship between positivism and the viewpoints that they disparage. This may foster more productive research that sheds light on how positivism has actually influenced current thinking.

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