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Send out your light and your truth! Let them guide me. Psalm 43:3

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A Presuppositional Critique of Constructivism

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A Presuppositional Critique of Constructivism

Whenever setting forth a "theory of everything" or a meta-narrative, an author typically stands in the original or accepted paradigm to communicate his or her thoughts, while seeking to destroy that one and replace it with a new "correct" one. Constructivist theorists do this when they stand on the shoulders of traditional theorists with regard to logical argumentation, the notion of the value of persuasion, and purposiveness (writing a book to inform others, make money, and arguably believing themselves correct); but, in so doing, they essentially knock out their own foundations from beneath themselves. Their own theory does not give them impetus to say anything about the theory.

The argument set forth herein is a presuppositional one. Specifically, the author argues that it is one's presuppositions that characterize - and even constrain - acceptance of one meta-narrative or another. Subsequently, it is argued that understanding the epistemological alternatives helps one determine which system seems most true to reality, and which is the most comprehensive and cohesive. Then, constructivism as both a philosophical and educational approach are considered and critiqued from a Biblical revelation-based, objectivist approach.

Everyone accepts some form of meta-narrative (even those who rail against meta-narratives have one of their own). It is vital to think on the level of presuppositions (or axioms) because these always play an important, yet often hidden, role in discourse. Schlossberg (1990) clearly illustrates the importance of understanding assumptions and the role they play when he argues that assumptions bypass the critical engagement of underlying ideas to address the overt concept expressed in an argument. Once an assumption is allowed to persist, one's mind tends to accept it for the duration of the discussion. He writes: "A false assumption can be combined with an unassailable argument, which then proves the truth of what is false" (1990, p. 211).

Within the field of education, the question arises, whether children's "ways of knowing" should be considered formative for the classroom and curriculum or whether classroom or curriculum should form the student's "ways of knowing." Essentially the question is reduced to asking whether history, academic fields, and culture should be instructive of the student (an objectivist approach), or whether the student should fit these ideas into his or her thinking to transform information (a constructivist approach). The answer is determined by one's presuppositions not only about the nature of truth, but also by the current understanding of how learning occurs. The first part is philosophical, the second is functional.

A priori human mental endowments must exist for learning to take place (Clark, 1968, p. 57). Empirical discoveries can never be universally true laws as experience can never give universal judgments; mankind is constrained by its temporal nature, only knowing the past (Clark, 1968). Therefore, the author assumes *a priori* endowments[i] and will discuss this further shortly. Given this *a priori* assumption, the Sapir-Whorf hypothesis - on which much of constructivism rests - that "language precedes thought" - is incomplete.[ii] It is incomplete in that it fails to illuminate how anything, including language, is learnable at all. The only possibility is that at least some *a priori* mental endowment exists. Most notably, the author would argue, is that mankind is endowed with memory, classification, recognition/attribution faculties, and logic (inductive and deductive reasoning capabilities). Language is merely the vehicle for transmission and organization of thought – the thought emanates from sensory data after analysis by these *a priori* endowments that exist in human beings reflecting the image of God.[iii]

Essentially, what people believe about ontology (being or beings), epistemology (knowing), hermeneutics (interpretive methods), and axiology (valuations), as well as the manner in which thinkers give primacy to these ideas, dictates the kinds of answers one can arrive at

regarding all of life. Each decision on the basic questions provides an axiom and leads to other axioms based on those foundational beliefs. Foundational beliefs are just that: beliefs. They are non-provable. While one cannot act as if presuppositions are provable, it is possible to make arguments in their favor and demonstrate their coherence and validity, and even to demonstrate that they are valuable in interpreting the world. Are presuppositions useful in making sense of the world of reason and experience, the world that is known? As Gordon Haddon Clark puts it, ". . . can we assert creation without implying something about zoology? No, truth is not thus disjointed. It is systematic. And *by the systems they produce,* axioms must be judged" (emphasis added) (1968, p. 60).

Ontological Options

Ontology deals with the questions "Who am I?" and "How do I exist?" (Martin, 2006). The answers to these questions could be wildly divergent, and historically this can be seen in various faith systems, both religious and non-religious. However, whether one examines a Babylonian creation epic or is reading a modern attempt to explain big bang cosmology, there are still the same two options: a super-naturalistic or a naturalistic explanation (Martin, 2006, p. 19). Although it is beyond the scope of this paper to discuss in depth the mechanisms by which this binary comes to be, it is important to note that one's choice in this regard dramatically affects choices in the other arenas. Thus, people accept or differ in ideas about the type of special or natural creation we live in, and the type of creator or process that brought about this world. T.S. Eliot gives the options quite clearly, "Man is man because he can recognize supernatural realities, not because he can invent them. Either everything in man can be traced as a development from below or something must come from above… you must be either a naturalist or a supernaturalist." (1932, p. 397).

Typical options regarding questions of ontology begin with the concepts of *Ontological Realism* (that a world exists independent of human cognition, thought, or speech processes) and *Ontological Idealism* (that "the world" is a construct of human cognition and thought). These choices are based upon personal decisions with regard to the broader category: natural or supernatural. The supernatural option leads the author to assume a Creator. The Biblical concept of the Creator God is most compelling on numerous levels but these levels are not discussed here. Thus, answers to the subsequent ontological issues are developed on that basis. *Ontological Realism* seems most appropriate because when a person's noetic activity ceases, the world continues because a "proposition exists because God thinks or conceives it" (Plantinga, 1982, p. 70). Therefore, in some sense the author does accept a form of constructivism of Reality, in that God constructs it by His thought. God creates a proposition by thinking/speaking it and as such God also believes the Truth of His own proposition. Plantinga argues that the most sensible anti-realists are Biblical theists (1982). To clarify: One's choice regarding a *naturalistic* or *super-naturalistic* ontology leads to choices regarding a *real* or *ideal* ontology of the world (creation).

Epistemic Options

The concept of "how people know anything at all" and on "what basis people accept that knowledge" is not as straightforward as the ontological options. To clarify the concept, John Peifer asks "Do we, in knowing, by means of what is thought, attain to things, to realities which enjoy an independence in physical existence outside of thought, or do we by knowing attain only to what is in thought?" Peifer continues, "Does thinking terminate in things or in thought?" (1962, p. 11). Plato attempted to answer this question in *Republic*, Book VII with *The Allegory of the Cave*. Plato's argument is that people are like chained prisoners who can only view in one direction, toward the wall of the cave they are within. There burns a fire behind them

illuminating objects and their own shadows. This is all they know and all they can know. They do not realize that there is a real thing, a so-called Platonic "form" that is what is really real, because they only perceive the shadows (Plato).[iv] Much of C.S. Lewis' writings serve to illustrate his concept of Plato's forms in Christian fashion – from *The Chronicles of Narnia* series to other more expressive works such as *Mere Christianity* and *God in the Dock*. Following from this, Lewis' essay "Meditation in a Toolshed: 'Looking Along' vs. 'Looking At'" begins to advance Lewis' concept of the shadowlands.

Plato's answer to the question is that human thinking ends in representations of things, and that "if the prisoners are released and disabused of their error" they would actually see and know what is really Real (Plato). Of course, Plato's point is that people need to be ruled by philosopher-kings (like himself) so they can be released in a wise manner from their slavery. Plato answered his epistemological question based on his ontology. This pattern of reasoning (deal with ontology first, then epistemology derived therefrom, followed by hermeneutics, etc.) basically held true until the Enlightenment. It is at this point we see a shift in primacy from being to knowing, or rather, from ontology as primary, to epistemology as primary. Knowing came to precede being, as Descartes placed the rational self as the foundation of knowledge with "*Cogito ergo sum*" ("I think therefore I am") (Sire, 2004, p. 216). Thinking and rationalism (not mere rationality) become the hallmarks of the Modern world. In science this worked wonders, but in philosophy the result was dismal.

For instance, the philosopher Hume raises the question "How is it that we know anything?" and Kant attempts to answer him. The effect of Cartesian rationalism is "exalting the knowing self to the position of 'creating' reality" (Sire, 2004, p. 218). Nietzsche furthers the Cartesian argument and questions the certainty of the existing self. "What if it is the thinking that

creates or causes the *I* rather than the *I* that causes the thinking?" (Sire, 2004, p. 218). So, as Sire points out, there is another shift in primacy: "from knowing to meaning." Knowledge can no longer be a basis for anything and thus Truth vanishes (2004, p. 217). "In the absence of truth there is only power" (D. Beck, personal communication, October 9, 2007), and justice vanishes with truth.

It is *power* that postmodernists typically focus on. *Truth* and *truths* are "power" and "the authority to determine what counts as true is also the power to determine who counts as important" (White, 2006, p. 55). This assumption plays an important role in educational philosophy. Essentially, then, there is a shift in what is seen as the philosophical first question. The Pre-moderns structured philosophy in the following manner: ontology → epistemology → hermeneutics; the Modernist in emphasizing knowledge changed the order to epistemology → ontology → hermeneutics; the Postmodern era now emphasizes meaning which reorients the questions again to hermeneutics → epistemology → ontology.

The position that Plato ends with is what might be called naïve realism or common-sense realism. The notion is that meaning is found in a "'vertical' relation between terms and their referents," or rather, that words correspond directly with Reality (Sayer, 2000, p. 35). Naugle argues that there are three options with regard to epistemology: naïve realism, creative anti-realism, and critical realism. The following premises describing the positions are from Naugle's book *Worldview: The History of a Concept* (2002, pp. 322-24).

Naïve Realism

1) an objective, independent reality exists;

2) the character of this reality is fixed and independent of any observer;

3) human knowers have trustworthy cognitive capacities by which to apprehend this fixed reality unencumbered by personal prejudices and traditions;

4) truth and knowledge about the world are discovered and certain, not invented and relative.

Creative Anti-Realism

1) while an external world may, and probably does exist, its objective character remains forever obscure;

2) human knowers lack epistemic access to apprehend the world as it is in itself;

3) what poses as reality is linguistically constructed, an idealistic product of the human mind;

4) consequently, truth and knowledge about the world are not discovered and certain, but invented and relative.

Critical Realism

1) an objective, independent reality exists;

2) the character of this reality is fixed and independent of any observer;

3) human knowers have trustworthy cognitive capacities by which to apprehend this fixed reality, but the influences of personal prejudices and worldview traditions conditions or relativizes the knowing process;

4) truth and knowledge about the world, therefore, are partially discovered and certain, and partially invented and relative.

The Naïve Realist would answer the question "Can we know truth it itself" (ding-an-sich) in the affirmative. The Creative Anti-Realist would also answer in the affirmative, in that truth is created within the subject so, in that sense, people can truly know what they create (truth is

subject-laden). But the Critical Realist would answer both yes and no: "yes" in that people have epistemic access to the Truth, which is Real, but "no" in that there are subjective elements to reality (they are perspectival due to the finiteness of human beings), and because the sin nature constrains the ability to know the Truth entirely as sinners are biased against the Truth. Again, the importance of revelation is illustrated.

Van Til argues that those who do not believe in revelation "can and do argue logically, but do so on borrowed capital" (1978, p. 69). The theistic critical realist would likely parallel each proposition mentioned above with the following concepts: 1) God thinks/spoke this Reality, so it is Real; 2) God is unchanging; 3) mankind is created in the image of God (i.e., he has the capacity for logical reasoning), but the fall of man affects his faculties; 4) Scripture assumes Truth but allows for the subjective nature of some truth in reality (for example, the Apostle Paul becomes "all things to all men" (I Cor. 9:22)). This is also seen in 1 Cor. 13:12, where Paul states "For now we see in a mirror dimly, but then face to face; now I know in part, but then I will know fully just as I also have been fully known."

Truth? What is Truth?

Aristotle, in defining *truth*, stated: "To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true" (Stanford). So to Aristotle, truth is a subjective acknowledgment of what actually is. This is known as the correspondence theory of truth. The correspondence theorist would argue that absolute or objective Truth is available and the human faculties can know it. This is also essentially the Platonic or naïve realist conceptualization of truth.

It is largely on the correspondence theory of truth that constructivism levels its most devastating attack. Putnam mentions that there is "no 'God's-eye view' from which we might

compare our utterances to the world" (2008, p. 103). He argues that it is impossible to know who is right by standing inside a competing paradigm; people can only make more or less compelling argument in favor of one perspective or another. Arguments are more or less compelling based on our presuppositions regarding the nature of man, knowledge, and reality, but they terminate in unproven assumptions (axioms) about reality that collectively maintain a semblance of logic and define our conceptual schemes.

Clark is correct that secular philosophy has failed in that it cannot establish the law of non-contradiction (1968, p. 64). According to current trends in constructivist philosophy, objects can be both true and false in the same given situation. This premise undoes almost 2500 years of philosophy and denies what most experience in everyday life: namely, that pink is not blue and that $1+1 \neq 11$.

The typical understanding of truth is *justified, true belief*. Thus, it would be written logically accordingly:

Any thinker T, knows p, if and only if

1. T believes *p*;
2. T is justified in believing *p*;
3. *p* is true.

The major issue is that postmodern thought is destroying objectivity about facts, justification, and rational explanation, and in so doing it destroys the possibility of any knowledge or truth at all (Boghossian, 2006, pp. 15-24). There is only relativism about everything, including logic. As Boghossian, (2006, p. 40) points out; the social constructivist picture of reality is as follows:

1. Since we have socially constructed *p*, therefore *p*.

2. Since it is possible that another community should have constructed the fact that *not-p*, then possibly *not-p*;
3. So, it is possible that both *p* and *not-p*.

He continues,

> How could it be the case both that the first Americans originated in Asia *and* that they did not originate there but originated instead in a subterranean world of spirits? How could it be the case both that the world is flat (the fact constructed by pre-Aristotelian Greeks) *and* that it is round (the fact constructed by us) (2006, p. 40)?

The idea that truth is socially constructed essentially does away with any possibility of having facts at all. Truth is impossible, because constructivism (specifically fact-constructivism) stands contrary to the law of non-contradiction. The law of non-contradiction cannot be established if modern secular philosophy has destroyed the possibility of it. Constructivism thusly destroys the foundations that it argues from, namely that it is a logical, empirically demonstrable and testable theory. Since it cannot do so, there remains only irrationalism.

A More Solid Foundation

Turning back to Clark's presuppositional argument of axiomatic revelation, John 1:1 states: "In the Beginning was the Word, and the Word was with God, and the Word was God." The term translated "Word" is the Koine Greek *Logos*, from which the word 'logic' derives. Christ is the *Logos*: that is, "the definition, the theory, the argument, the principle of law, the sentence, the wisdom … so in the beginning was, the Logic" (Clark, 1968, p. 67). Logic therefore is the description of *how* God thinks. Demonstrating this concept, Stephen Charnock

(as quoted in Clark, p. 66) argues, "God knows himself because his knowledge with his will is the cause of all other things."

The law of non-contradiction merely explains the manner in which reality, as created by God's thinking, works. The thoughts in the Bible are the thoughts of God (1 Cor. 2:16 – "We have the mind of Christ"; Phil. 2:5 – "Let this mind be in you which was also in Christ Jesus."). Therefore, men have an *a priori* rational endowment because God's nature is rationality. Human beings are created in His image (*imago dei*) and are "the expression on a created level of the internal coherence of God's nature" (Frame, 2004). Similarly, "the science of logic seeks to discover the principles (such as the law of non-contradiction) for correct inferences and correct judgments of consistency" (Frame, 2004).

Historical Approach

A rather common breakdown within the philosophy of history is viewed from the perspectives of transitions in thought from pre-modernity to modernity and then to post-modernity. Pre-moderns characteristically accepted the authority of the church. Hence there is an acceptance of the status quo with regard to the available answers to the basic questions. Regarding ontology: God created and mankind exists within that creation and can know it. The authority of the church and the truth of the Scriptures were acknowledged because "what was needed for both knowledge and virtue could be found in the resources of tradition" (White, 2006, p. 25). Education was rare and typically focused on a study of authoritative texts, not critical studies or experimentation (White, 2006, p. 26). So Premoderns ultimately placed their faith in authority. Moderns lost their faith in authority and placed it in human reason around the time of the enlightenment. Finally, the Postmoderns kept the Modernist distrust of authority but lost their faith in reason and have found nothing to replace their faith (White, 2006, p. 41).

Knowledge Shifts: Pre-modernity → Modernity → Post-modernity

The Cartesian foundational proposition *Cogito ergo sum* sets up the Modern era; an era in which most philosophers believed certain truths were actually self-evident (Boghossian, 2006, p. 116). Descartes and Locke were both convinced of the reasoning power of the human mind to solve the deepest questions plaguing humanity (White, 2006, p. 31). Prior to the Cartesian revolution, most knowledge in Western society was derived from church teaching and the Bible more indirectly was the basis for what was true. For Pre-moderns, the idea "was for the Biblical text to shape the worldview of the reader" (White, 2006, p. 118). Nevertheless, Descartes' desire to find complete intellectual certitude was fatal to Modernism, to what Kant called the "Cartesian revolution." Too much faith was placed in the ability of the human mind (Sire, 1997). Sire (1997, p. 236) points out that God claims to be "I AM WHO I AM": the self-existing, self-referential one (cf. Exodus 3:14). The rationalist approach says that there is reality and people can know it through their own inherent rationality. This has come under intense scrutiny (by both pre-moderns and post-moderns) due to the failure of modernity to create the better world it has promised since the Enlightenment. Progress has never occurred in the utopian manner of the modern context. The constructivist approach responds and asks how one even knows there is Reality outside of his or her subjectively created reality (i.e.. creative anti-realism). All that can be said is that the only reality that is even knowable is that which we create. The critical realist admits fallibility in knowledge (as Kuhn so aptly demonstrates in *The Structure of Scientific Revolutions*) but adheres to the existence of an objective reality (contra Kuhn who was an anti-foundationalist). Reality is knowable, but from a fallible, finite perspective. There is a blend of the rational and objective with the subjective; that honors both the *Logos* (who is Christ) and the

subjective created being in his or her context. It is a reorientation from an overemphasis on objectivity (modernity) and an overemphasis on subjectivity (post-modernity).

Problems with Constructivism in Particular

Schlossberg criticizes the social constructivist position in that it "always has the environment precede the idea, even when it cannot provide evidence for that order" (1990, p. 154). Constructivists Berger and Luckmann admit that they take their root proposition from Marx: specifically Marx's premise "that man's consciousness is determined by his social being" (1967, pp. 5-6). The issue with this sort of formulation is that there is another assumption: that history is the same as nature (another derivative of Marx's materialism). Reinhold Niebuhr criticizes this in *The Irony of American History*, calling it "naïve belief" (2008, p. 80). The idea that methods used in understanding nature can be used in studying human action and interaction is naïve according to Niebuhr (i.e., it is a category error). But this should be no surprise as most social scientists begin with presuppositions of the natural (rather than supernatural) and hence believe that "mind is a product of material origin or that human behavior is completely contingent on prior experiences" (Schlossberg, 1990, p. 153). Following from this, "the habitat accounts for the opinions of the thinker and explains why his ideas are different from those of another person who lives in a different habitat" (Schlossberg, 1990, p. 153). Schlossberg continues:

> The all-inclusiveness of the system [social constructivism] makes it invulnerable to refutation, regardless of the evidence adduced . . . All arguments are turned back as further evidence that the speaker is bound by the determining influence . . .which Mannheim admits is a "means for side-stepping the discussion." . . . Such imperviousness to refutation, far from being a sign of

> strength, is further evidence that these disciplines are not the sciences they claim to be (p. 156).

Karl Popper levies strong criticism of constructivism by arguing, according to the theory, that the entire theory might simply be the expression of the class interests of those who advocate this theory (1971, p. 243). This is actually quite amusing as it might be the only critique that actually cannot be subsumed by the theory.

Philosophical constructivism as a system is internally consistent for the most part, in that it is strong enough to redefine everything according to the theory itself. However, like any other worldview, it has certain basic propositions that are un-provable, that must be accepted simply on faith. One of the main problems with this worldview is that it terminates in the relativization of Truth to perspectival truths. There can be no True facts in this system, only pragmatic facts. This is self-refuting in that scientific data, argumentation, and logic are used to demonstrate and "sell" a worldview that denies the Truth of those types of arguments. Secondly, it is not ultimately a livable and viable system: the hard sciences reject it outright as no facts can be generated in the system; thus no one can fly to the moon if we socially construct physics. In the end an inability to determine what is True must inevitably result in a breakdown of culture as opposed to a protection of *all* from the power of others over them, as postmoderns typically seek (cf. White, 2006, p. 55-57). Knowledge is no longer seen as power; for the postmodern, *truth is power*; so anyone claiming to have Truth is immediately castigated as attempting to control and "colonize the minds" of others. While it is important to be concerned with how Truth is used, throwing out the concept of throwing out Truth altogether does not eliminate oppression. The removal of Truth merely causes all truths to have equal legitimacy, so that anything that the

powerful happen to dislike can be deemed oppressive, and still be called true. Legal philosopher Robert P. George argues that relativism

> . . . is the worst possible way to defend the ideals of freedom and democracy because moral relativism, if it does anything, undermines those ideals. If all things are relative and matters of subjective opinion, then the belief in the dignity of the individual, the belief that people ought not to be enslaved, the idea that people ought to have their freedom respected… all of those would be undermined. There would be no reason for believing those; the contrary views of Stalin, or Hitler would have just as great a claim to governing, to ruling, as our own claims (Acton Media, 2008).

The effects of constructivist relativism are as devastating within the educational field as within the realm of political science and the law. The concept of the equal legitimacy of truths decimates traditional understandings and purposes of education. Walter Truett Anderson (1997) argues that post-modernism "rejects the notion that the purpose of education is primarily to train a child's cognitive capacity for reason in order to produce an adult capable of functioning independently in the world." Anderson continues, "That view of education is replaced with the view that education is to take an essentially indeterminate being and give it social identity" (p. 114).

Constructivism in Education

As any comprehensive theory, constructivism has implications for other areas of life. In education, postmodern thinking has detrimental effects as truth and reality no longer exist other than in our perceptions and beliefs of that truth or reality. When philosophical constructivism

extends into the realm of education (yielding the educational theory called constructivism), the philosophy sets forth specific practices.

Windschitl (1999) defines constructivism as the "belief that learners actively create, interpret, and reorganize knowledge in individual ways" (p. 151). Similarly, Siegel argues, "knowledge is acquired through interactions with the environment." Travis and Lord (2004) provide an example of how constructivism works in a non-major biology class and lab, stating "definitions of terms were not simply given; instead, student teams had to create their own definitions and then explain them to the class" (p. 16). Such ideas have direct roots in philosophical postmodernism - in the social constructivist vein. Piaget and Vygotsky took different stances on whether physical development precedes learning, or social learning precedes development (Galloway, 2001). Vygotsky's is a more entrenched constructivist position, focusing notably on language and meaningfulness in development, while Piaget focuses instead on assimilation and accommodation of new ideas and does not seat them linguistically, instead seeing children as born with schemas and continually acquiring these schemas from which they comprehend the world. It could be said that Vygotsky discussed the interactive nature of truths and Piaget focused on factual representations of truths. If modernism primarily appeals to rationality, then postmodernity primarily appeals to meaning. If an object or concept in one's mind does not actually reflect some reality outside that mental concept, then interpretation and meaning become absolutely essential. If two people have no common external reference point, then all communication is, in the final analysis, pointless.

Nevertheless, as people do exist in society, and they have a pragmatic need to act as if things were really true, given that people do engage in social activity. To that end, the facilitation of *social* existence, or education, must be reconceived since "all knowledge is invented or

'constructed' in the minds of learners. It can't be any other way, postmodernists say, because the ideas teachers teach and students learn do not correspond to any objective [external] reality" (DeLashmutt & Braund, 1996, p. 99).

According to the constructivist view of truth, the purpose of education is either to "educate the individual child in a manner which supports the child's interests and needs" or to bring about "social transformation and the reconstruction of society aligned with democratic ideals" (Vadeboncoeur, 1997, p. 15). The first is a less radical goal, but both of these goals are derived from an anti-realist view of truth. As mentioned previously, "knowledge, ideas, and language are created by people not because they are 'true,' but rather because they are useful" (DeLashmutt & Braund, 1996, p. 99). Abdal-Haqq argues that to "accomplish the goals of social transformation and reconstruction, the context of education must be deconstructed, and the cultural assumptions, power relationships, and historical influences that undergird it must be exposed, critiqued, and, when necessary, altered" (1998, para. 8). Constructivism takes a very specific socially and politically oriented shape in the classroom to bring about changes in the societal status quo.

For the constructivist, since learning only happens in the context of social interaction, and since teachers do not have privileged relationship to truth, constructivists advocate a radical departure from the modernist idea of education. Bruffee (quoted in Petraglia, 1998, p. 95) states that "a social constructionist position in any discipline assumes that entities we normally call reality, knowledge, thought, facts, texts, selves, and so on are constructs generated by communities of like-minded peers." Thus,

> . . . knowledge arises through *consensus* rather than through *correspondence* with objective truth or in an individual's autonomous construction of that reality. For

> educators… social constructionism seems a logical and complementary extension of constructivist learning theory especially as embodied in sociohistoricist and second-wave cognitive schools of thought (emphasis added) (Petraglia, pp. 95-95).

If there is no knowable truth outside of oneself, the individual thinker becomes the only thing of importance since it may not be True that others really exist. Functionally, though the individual must yield to social definitions, the social truth is that others do exist. Ultimately, any form of constructivism that is based in anti-realist epistemological theory cannot but begin to fall into solipsism. Martinez-Delgado (2002) argues that constructivism ends in solipsism or else falls back toward realism, often paralleling "the axioms of the realist model; at the same time constructivism aspires to conserve the principal methods of scientific analysis (with their representative mental operations) and their results…" (p. 847). In any case, the constructivist can never remain grounded in constructivism consistently. Quoting Balmes (1846), Martinez-Delgado in essence ridicules Berger and Luckmann's (1967) "reality of everyday life" as overly philosophical and anti-real:

> The same philosophers that have taken skepticism so far, have concurred on the necessity of… relegating doubt to the world of speculation. A philosopher will argue over everything, as much as he wants; but in ceasing the argument, he stops being a philosopher and continues being a human like the rest and enjoys certainty like the others (Martinez-Delgado, 2002, p. 850).

In discussing pedagogy, Martinez-Delgado (2002) says that constructivist teaching techniques are another example of the fall back towards realism. The idea that "a planned connection between activities and the knowledge developed as a result entails the acceptance of a psychological realism…" (p. 850). In the end an "extreme objective realism is superimposed on

psychological realism [and] the dependence of the knowledge upon the activities performed is uniform for every student…" (Martinez-Delgado, 2002, p. 851). Constructivism "adopts the positions of a realism so absolute that it approximates to the attitudes of a mechanistic materialism" (Martinez-Delgado, 2002, p. 851).

The chart below, recreated from DeLashmutt and Braund (1997, p. 97) demonstrates the Modern to Postmodern shift in perspective in four important arenas that pertain to education on a "below the surface" level: knowledge, culture, values, and human nature.

	Modernist Theory	**Postmodern Theory**
Knowledge	Educators should be authoritative transmitters of unbiased knowledge.	Educators are biased facilitators and co-"constructors" of knowledge.
Culture	Culture is both an object of study and a barrier to learning. Students from diverse cultures must be trained in a shared language before teachers can transmit knowledge to them.	The modernist goal of unifying society results in domination and exploitation, because unity is always based on dominant culture. All cultures are not only of equal value, but also constitute equally important realities. Minority students must be empowered to fight against Eurocentric enculturation.
Values	Traditional modernists believe that educators are legitimate authorities on values, and therefore they should train students in universal values. Liberal modernists argue that education should be "values neutral." Teachers help students with "values clarification," deciding what values each individual student will hold. Values can and should be separated from facts. The most important values are rationality, freedom, and progress.	Education should help students construct diverse and personally useful values in the context of other cultures. Values are considered useful for a given culture, not true or right in any universal sense. Since teachers cannot avoid teaching their own values, it is okay for teachers to openly promote their values and social agendas in the classroom as long as these are not fundamentalist or totalistic. Important values to teach include diversity, tolerance, freedom, creativity, emotional expressiveness, and use of intuition.
Human Nature	Modernists generally believe in a stable, inherent self that can be objectively known. Since humans are thought to have a stable essential nature, IQ tests and other similar "objective tests" can be used to discover students' innate intelligence.	Students have no "true self" or innate essence. Rather, selves are social constructs. Postmodern educators believe self-esteem is a precondition for learning. They view education as a type of therapy. Education helps individuals appreciate their identities rather than discover them. Individuals and society progress when people are

	By giving students mastery over subject matter, teachers enhance students' self-esteem. Education helps individuals discover their identities. Individuals and society progress by learning and applying objective knowledge.	empowered to attain their own chosen goals.

At issue in the postmodern view of education is the central theme that knowledge has no objective basis on which individual perceptions and ideas can be weighed. Essentially this negates education from the viewpoint of the pre-modern (traditionalist) or the modernist educator. This is why constructivist methodology in education appears so odd. From this perspective, all student ideas are as valuable as the instructor's, so that the teacher is refashioned as a facilitator of learning. Teachers are situational designers and assistants. Alesandrini states that teachers "in a constructivist classroom are called to function as facilitators who coach learners as they blaze their own paths toward personally meaningful goals" (2002, para. 11). Leaving nine-year-olds to move toward "personally meaningful goals" might not be a wise idea. As Alesandrini and Larson explain: "Collaboration facilitates each member's ability to see problems from multiple perspectives or different points of view. Group members constantly 'negotiate meaning' . . . " (2008, p. 118). This "negotiation of meaning" illustrates Richard Rorty's comment on truth being whatever "our peers will let us get away with saying" (1981, p. 176).

While students come together to learn collaboratively, DeVries and Zan (1996) argue that education which is "preoccupied with giving back correct information destroys curiosity and leads to intellectual dullness and knowledge full of egocentric misunderstanding" (p. 118). They also clarify the constructivist perspective on discipline:

> Emphasis on obedience fosters self-doubt and other qualities needed for submission. . . . Authoritarian regulation of academic lessons reinforces moral as well as intellectual heteronomy . . . reflected in a passive orientation to the ideas of others, an unquestioning and uncritical attitude, and low motivation to reason (DeVries and Zan, 1996, p. 118).

But the constructivist perspective undermines any ability to enforce discipline, so the teacher will need to depart the constructivist paradigm to tell a student that "school isn't the time for texting friends on their cell phone." Telling a student to go to the principal's office for misbehavior is simply a power play and a display of, from a constructivist point of view, teacher arrogance. In other words, teachers adhere to constructivism for a lesson, but not in the rest of life.

Common trends and teaching techniques that abound in constructivist literature include a focus on the learner rather than the learning (Windschitl, 1999); the concept that all viewpoints are valid, so there are no "right" answers (DeLashmutt & Braund, 1996); the affirmation that all cultures and lifestyles must be affirmed as valid choices if individually made (tolerance) (Baglieri & Knopf, 2004); a general distaste for rote memorization and fact transmission (Windschitl, 1999; Travis & Lord, 2004); and attention to personal experience, for in sharing experiences, people negotiate meaningful symbols which are shared (Fosnot, 2005; Blumer, 1969; Mead, 1934). Grading by a teacher is seen as an illegitimate assertion of power over the student, and it is thought that students should be involved in self-assessment through developing their own evaluative criteria (Alesandrini and Larson, 2002).

Windschitl (1999) demonstrates his postmodern motivations when describing the problems associated with the modernist teacher-centered or fact-based instruction:

> Individual desks face the front of the room, where the teacher occupies a privileged space of knowing authority; students work individually on identical, skill-based assignments to

> ensure uniformity of learning. Value statements are embedded everywhere in this environment (p. 152).

Truth cannot be known, so it becomes illegitimate to assert knowledge, as knowledge can only come from a desire for power (a "power play"). In the teaching context, though, it would seem to destroy the traditional purposes of education. Windschitl (1999), DeLashmutt & Braund (1996), and Abdel-Haqq (1998) make that point well.

One final issue regarding Constructivism as an educational philosophy is that there are criteria that federal and state governments have imposed as to what should be taught and to what level of learning. Windschitl (1999) writes that perhaps the most "politically sensitive issue confronting teachers is that *the diversity of understandings emerging from constructivist instruction* does not always seem compatible with state and local standards (p. 155) (emphasis added). Given the presuppositions of constructivist philosophy, there is no Truth, therefore there are only truths; hence it is disingenuous for a government to set forth which truth(s) should be taught. But since it is required by law (and constructivist teachers would get in trouble for not teaching the material), it is easy to forget the philosophical underpinnings of constructivist educational philosophy. Most will simply act as Balmes (1846) says people do. A constructivist teacher will "stop being a philosopher and continues being a human like the rest and enjoys certainty like the others" (in Martinez-Delgado, 2002). The constructivist acts in life as if things are certain, which is why constructivists continue to survive. If they acted as if laws of motion were simply social constructions, they would easily pull out in front of trucks without fear. However, constructivists do not live out their philosophy consistently because they implicitly recognize that some things are True: in this case, that pulling out in front of a tractor-trailer is

imprudent since the truck might not be able stop and might strike the constructivist's vehicle, causing property damage, injury, or death.

Constructivist Curricula

Many constructivist curricula have been adopted, notably in New York City, where the program "Everyday Math" has been adopted. But it was dropped in Texas for "leaving public school students unprepared for college," according to one *New York Sun* article (Green, 2007). Columnist and author Michelle Malkin (2007) argues that this curriculum doesn't teach memorization of multiplication tables. Instead the fifth grade "Everyday Math" book asks questions such as

> *A. If math were a color, it would be___, because___.*
> *B. If it were a food, it would be___, because___.*
> *C. If it were weather, it would be___, because___.*

This math curriculum, termed "fuzzy math" by some critics, might be partly to blame for recent lower than expected scores on math and science in the 2006 Program for International Student Assessment (PISA). According to the report, American students fell below the international average, scoring below students from16 of 30 developed nations that participated in the examination (PISA, 2006). Data from the 2003 exam yielded the same results. Given the postmodern turn in society, and its embrace by the educational arena in particular, this is of little surprise. The trend will likely continue unless math and science curricula are reexamined in light of their presuppositions. As meteorologist M.J. McDermott explains in her video *Math Education: An Inconvenient Truth*, large sections of the *Everyday Math* textbooks concentrate on such subjects as how to use a calculator, and how to plan a U.S. or World Tour, and leave insufficient time for learning how to "do" math. McDermott quotes the textbook:

> The authors of Everyday Mathematics do not believe it is worth students' time and effort to fully develop highly efficient paper and pencil algorithms for all possible whole number, fraction, and decimal division problems. Mastery of the intricacies of such algorithms is a huge endeavor; one that experience tells us is doomed to failure for many students. It is simply counter-productive to invest many hours of precious class time on such algorithms. The mathematical *payoff* is not worth the *cost*, particularly because quotients can be found quickly and accurately with a calculator. (Everyday Mathematics, § 1.2.4) (emphasis added).

The mathematical *payoff* is not worth the *cost* of class time because the class time is invested toward socialization activities rather than a mastery of mathematics. Since the authors' experience tells them that many students are doomed to fail, they seem to wish to make all students less competent in math. The goal of this math curriculum is for the student to have a meaningful experience (as evidenced by the emphasis on group activities) rather than for him to achieve success.

Math is simply one of many areas that are being undermined by constructivist educational theory. In the end, the goals of constructivist learning seek to "help teacher education students deconstruct their own prior knowledge and attitudes, comprehend how these understandings evolved, explore the effects they have on actions and behavior, and consider alternate conceptions and premises that may be more serviceable in teaching" (Abdal-Haqq, 1998). Again quoting Abdal-Haqq:

> To derive culturally relevant and socially just pedagogy and practice from constructivist epistemologies, Martin (1994) and Vadeboncoeur (1997) urge teacher educators to deconstruct and scrutinize cultural assumptions that underlie

> various interpretations of constructivism to expose how social beliefs have influenced the development of theory and practices. Without such scrutiny, *societal inequities* and *historical forms of oppression* may be perpetuated in supposedly constructivist classrooms, and *the very constraints on individual development constructivists seek to remove or ameliorate will be reinforced* (1998, para. 15) (emphasis added).

Ultimately, it appears that the main goal in constructivist theory is to not teach anything, but to simply allow the children to figure out what they want to be "true for them" through a guiding or facilitation process. The assumption is that children understand critical thinking (and hence what is best for themselves). The preceding quotation demonstrates that the ultimate concern is with "social inequities and oppression"—which may or may not be objectively the case. But even if oppression can be demonstrated, for the constructivist to remain consistent, they must admit that the oppression may be merely perspectival and not actual. If no truth is taught, then teachers cannot be guilty of oppression. Social stereotypes would dissolve once people realize that society has simply constructed things as true. However, it would seem that reflecting a commonly shared epistemic Reality is far more sociable than each person individually creating a reality that that no one else can relate to or understand. Eliminating oppression is a Biblical concept, but Christian theology does not provide a basis for every belief or state of affairs to be considered oppressive. Absent Truth, and anything can be considered oppressive. Ultimately, this comes down to a cultural and philosophical battle but one that has spiritual roots:

> For since the creation of the world His invisible attributes, His eternal power and divine nature, have been *clearly seen*, being understood through what *has been*

> *made*, so that they are without excuse. For even though they knew God, they did not honor Him as God or give thanks; but they became *futile in their speculations*, and their foolish heart was darkened. Professing to be wise, they became fools . . . (Romans 1:20-22, NASB) (emphasis added).

A Christian perspective on education cannot embrace fact-constructivism and remain Christian. If there is no such thing as Truth, "education serves the purpose of guiding students to create truth that is in accord with their individual belief systems. Truth becomes a social construct of a given culture; ideas must be formulated using the language of that culture . . . since all truth is created by individuals, then all truth must be equally valid" (Schultz, 2005, pp. 27-28). Thus, the basis of protecting human rights and even traditional liberties erodes. If all truths are equal, then the ideas of any genocidal tyrant are just as valid as Christ's. The Bible is clear, that knowledge of God—hence Reality, Truth, and definition (Logos)—ought to be transmitted to the next generation both within and without a given culture as charged in the Great Commission (Matt. 28). People should be told what the truth is. Then, as they grow in maturity, they may discover how it relates to their lives personally. Deuteronomy 6:7-9 states,

> You shall love the LORD your God with all your heart and with all your soul and with all your might. These words, which I am commanding you today, shall be on your heart. You shall teach them diligently to your sons and shall talk of them when you sit in your house and when you walk by the way and when you lie down and when you rise up. You shall bind them as a sign on your hand and they shall be as frontals on your forehead. You shall write them on the doorposts of your house and on your gates (NASB).

> And Jesus came up and spoke to them, saying, "All authority has been given to Me in heaven and on earth. Go therefore and make disciples of all the nations, baptizing them in the name of the Father and the Son and the Holy Spirit, teaching them to observe all that I commanded you..." (Matt. 28:18-20, NASB).

Within these distinct yet related commands, there is an implicit assumption that God created people so that they can know truth and so that truth can be transmitted, but the knowledge and the transmission is best accomplished in the context of relationship. The constructivist would interpret the command of the Great Commission and the Gospel itself as a "power play": an assertion of the lack of equality in people's truths, which at its core, it is. Truth and meaningfulness are not always aligned in people's lives, but they can and should be. This is in part, what, what is meant by the "renewing of the mind" in Romans 12:2.

Appendix

To illustrate that constructivism is more of a faith system than a scientific enterprise, the following summation of the presuppositions is offered (from Schlossberg, 1990; Naugle, 2002; Plantinga, 1982; White, 2006; Sire, 2004; Boghossian, 2007):

- Constructivism assumes the truth of its root proposition "that man's consciousness is determined by his social being" (à la Karl Marx).
- Constructivism assumes a value-free social science (Schlossberg, 1990, p. 155).
- Proponents of constructivism unjustifiably exempt social constructivism from its own relativization (Schlossberg, 1990, p.155).
- Proponents of constructivism use logic and persuasion but disprove the truth of logic; the theorist falls prey to his theory (c.f. White, 2006, p. 82).
- Inherently, the act of telling others about social constructivism is meaningless, if one assumes the truth of the system.
- Proponents of constructivism attempt to include worldviews in their analysis (Berger specifically), but fail to see their own perspective as a worldview, which removes constructivism from the criticism it levies on others (Naugle, 2002, p. 233).
- Berger's constructivism conflates a difference in representation with a difference in the thing represented (i.e., he mistakes "different worlds" for "differences in belief about the world").
- Constructivism is "hugely empowering. If we can be said to know up front that any item of knowledge only has that status because it gets a nod from our contingent social values, then any claim to knowledge can be dispatched if we happen not to share the values on which it allegedly depends" (Boghossian, 2007, p. 130). For the postmodern thinker "grammar is

power: whoever controls the rules and ordinary usages of a language controls what can be thought" (White, 2006, p. 99).

- Constructivism asserts that the "powerful cannot criticize the oppressed, because the central epistemological categories are inexorably tied to particular perspectives. It also follows that the oppressed cannot criticize the powerful… unless we allow a "double standard: allow a questionable idea to be criticized if it is held by those in a position of power – Christian creationism, for example – but not if it is held by those whom the powerful oppress – Zuni creationism, for example" (White, 2006, p. 99).
- Constructivism is valuable in that it demonstrates the fact that society molds us in many ways, but if it molded us in all ways, and we are simply the "product of the blind forces of nature and society, then so is our view that we are only the product of the blind forces of nature and society. A radical sociology of knowledge is also self-refuting" (Sire, 2004, pp. 236-237).
- The idea that we have no access to reality and that we can only have stories is self-referentially incoherent. It is an illogical axiom, or "put crudely, this idea cannot account for itself, for it tells us something that, on its own account, we cannot know" (Sire, 2004, pp. 236-237). Likewise, if it is true that all discourse is a power play and should be questioned (a la Foucault) then should not that proposition also be questioned? The proposition only makes sense if that one sentence is excluded from being a power play (Sire, 2004, p. 236).
- The answer to the question "Is Constructivism True?" can never be answered in the affirmative. From within the system, the constructivist accepts relativity, so it can be *true* (but only in a pragmatic sense; that it is instructive perhaps), but not *True*. From outside the system, no one would accept it as true without being subsumed by the system.

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[i] For Durkheim, this meant Cultural Collective Representations & Mental Collective Representations; for Mead this was social interaction or language and meaning (Bergesen, 2004, p. 2). Both accept a materialist presupposition; the idea that we are composed solely of matter, and the organic "brain secretes thought like the liver produces bile" (Pierre Cabanis). The author rejects this presupposition in favor of the notion that personal identity is situated in one's soul or mind is and animates the body.

[ii] The second and third propositions are that "Language is not a given" and "Language is culturally determined." The three propositions create a both a "linguistic determinism" and a "linguistic relativity". The author would argue that language did not arise or evolve out of a social need, but God endowed Adam with this for him to name the animals, but more importantly so that Adam could talk with God, and vice versa. Even after the Tower of Babel incident, language (whichever one spoke) corresponded to a meaning in the mind that was communicated. Language does change as technology and culture change, but nonetheless it still communicates meaning.

[iii] Van Til asserted that both Christians and non-Christians employ logic, but non-Christians employ it to suppress the truth (1967, p. 103; Romans 1:18). Both use the same laws of logic, but the non-Christian has "no basis for believing that the laws of logic apply to reality" (Frame, 2004). Some forms of the way people think are socially constructed, to be sure, but to argue that only this surface reality[iii] exists, the reality of everyday life in Berger and Luckmann's terms, and to ignore the full range of worldview options is naïve to the presuppositionalist.

[iv] "The Matrix Trilogy" movies put this concept in vivid detail, albeit with extensive artistic license.