

## HSD Between Two Worlds

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### What's the Question?

As pioneers in the field of Human Systems Dynamics, we stand in the middle of an argument that is much larger than we are. We have negotiated this dangerous ground for thirty years, and yesterday an insightful question made me aware again of the need to clarify how we see the conflict and where we stand in it. The question also inspired me to make explicit some of the tactics we've used to find paths through this no-man's land between two positions that are popular and apparently contradictory. At risk of over-stating the obvious or under-stating the subtle, and with apologies to CP Snow, I have dipped into Wikipedia to describe the two extremes between which we travel. Then I will attempt to describe the semi-stable ground on which HSD stands between these two extremes and why and how we stand there.

### On the one hand . . .

#### From Wikipedia:

**Constructivist epistemology** is an [epistemological](#) perspective in [philosophy](#) about the nature of scientific knowledge.<sup>[1]</sup> Constructivists maintain that scientific knowledge is constructed by scientists and not discovered from the world. Constructivists argue that the concepts of science are mental constructs proposed in order to explain sensory experience. Another important tenet of Constructivist theory is that there is no single valid methodology in science, but rather a diversity of useful methods.<sup>[2]</sup> Constructivism is opposed to [positivism](#), which is a philosophy that holds that the only authentic knowledge is based on actual [sense experience](#) and what other individuals tell us is right and wrong.

### On the other hand . . .

#### Also from Wikipedia:

**Positivism** is a [philosophy of science](#) based on the view that in the [social](#) as well as [natural sciences](#), information derived from [sensory experience](#), logical and mathematical treatments and reports of such data, are together the exclusive source of all authoritative knowledge.<sup>[1]</sup> Positivism assumes that there is valid knowledge (truth) only in scientific knowledge.<sup>[2]</sup> Obtaining and *verifying* data that can be received from the senses is known as [empirical evidence](#).<sup>[1]</sup> This view holds that society operates according to general laws like the physical world. Introspective and intuitional attempts to gain knowledge are rejected.

## **And so . . .**

Toward the end of the 20<sup>th</sup> century, these two perspectives framed deep methodological, social, and emotional conflicts. Constructivists think positivists are heartless and cruel, insensitive, and Western dominated, cold, power hungry, boring, closed minded, and biased. Positivists think constructivists are mushy-minded, woo-woo, tenderhearted, soft headed, ineffective, unreliable, boring, closed minded, and biased. (Notice that they share the view that the other is boring, closed minded, and biased.)

## **On the third hand . . .**

Human Systems Dynamics rejects both of these absolute positions and embraces them both as valid in certain circumstances. We then dedicate much of our practice to assessing the immediate circumstances and selecting the stance that is best fit to the current environment and purpose.

HSD draws its fundamental theory from physical sciences of nonlinear systems, so one might see us as the epitome of positivist perspective. That is not accurate, though, because nonlinear sciences are themselves essentially anti-positivist in some fundamental ways. Complex adaptive systems, which demonstrate complex and nonlinear physical phenomena, continually create new realities. No situation is ever repeated, the parts don't add up to the whole, and the future is fundamentally unknowable. Based on this kind of physical science, HSD embraces emergent and sometimes unknowable reality.

At the same time, like constructivists, HSD recognizes the important role of the observer in knowing, decision making, and action. Each observer selects and interprets observations in unique ways, so myriad interpretations of reality can be expected, but not all interpretations are equally valid. HSD is fundamentally pragmatic, so it acknowledges the need to distinguish the better from the worse. We believe that some interpretations are more fit than others. When a decision has to be made and an action taken, one interpretation has to be selected as the most fit to purpose.

In this way, HSD denies the basic assumptions of both positivism and constructivism.

HSD is more than just not-this and not-that. It embraces both positivism and constructivism because of a basic assumption about reality. We believe that reality—conceptual, biological, physical, emotional, social, aesthetic, mathematical, and all others—has three fundamental conditions that create patterns and influence understanding and action. If those conditions are tightly constrained, then positivistic criteria are most useful because reality is predictable, knowable, and controllable. If those conditions are loosely constrained, or not constrained at all, constructivist criteria are more useful because each individual establishes his or her own pattern of meaning, so all interpretations are equally valid.

This stance is entwined in HSD theory and practice in many different ways. For example, we support a stance of inquiry, so that one (or a group) decides at any moment whether the current situation is more fit to positivist or constructivist engagement. We recognize that some level of certainty is required for responsible action in the real world, but we also know that absolute certainty is a delusion in a complex, nonlinear reality. We challenge ourselves and each other with the creative breadth of imagination and the cold, hard reality of sense perception.

As a result, we often find ourselves in uncharted territory. Radical constructivists see us as hopelessly positivistic, and radical positivists see us as hopelessly constructivist. When we can, we avoid the argument. When we can't avoid it, we try to engage in an inquiry that creates a bridge between the two, always recognizing that the bridge is, itself, both real and imagined.

To explore the assumptions, models, methods, and practices of HSD, visit our various on-line resources, including:

- [hsdinstitute.org](http://hsdinstitute.org)
- [adaptiveaction.org](http://adaptiveaction.org)
- [wiki.hsdinstitute.org](http://wiki.hsdinstitute.org)

Or read our forthcoming book *Adaptive Action: Leveraging Uncertainty in Your Organization* dues out from Stanford University Press in April, 2013.