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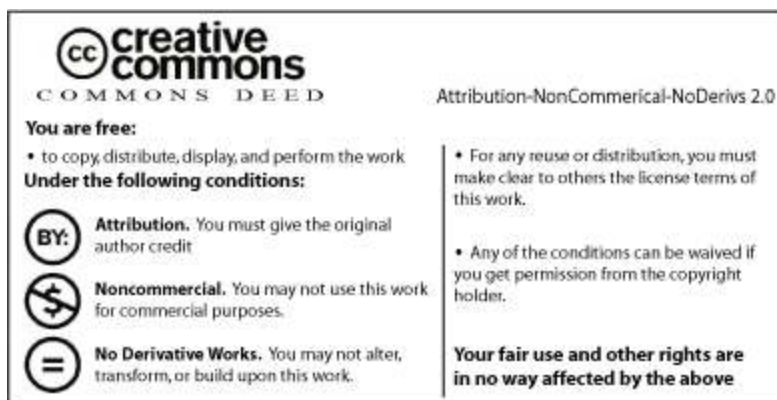
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**Dr. Stanton Wortham,**  
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**Theories of Learning:  
The Sociocultural Approach**

Transcription of Audio Segment



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**Stanton Wortham:** So, we haven't quite answered the questions about behaviorism or cognitivism and which of these approaches are appropriate for under girding the learning practices in our organizations, but I want -- even though we haven't quite solved that problem yet, I want before we pull the rabbit out from the hat, I'd like to go on to this third general approach, the sociocultural approach to learning. It's based on fundamentally different assumptions from the first two and unfortunately it gives us more questions about how we can combine, what seems like plausible aspects of all three approaches.

So, one of the basic differences in sociocultural approaches to learning from both cognitivism and behaviorism, is that the unit of analysis, the unit that you focus on in order to design your learning practices or think about how learning works, is bigger than the individual learner. So, in behaviorism, if the individual organism, whose behavior you're trying to shape and in cognitivism, if the individual learner whose building models, concepts, ideas, inferences in his or her head, but in sociocultural approaches, it's actually a whole system of things. So, what goes on, is when someone learns, it involves not just things going on in my head, it involves the use of tools that are drawn from the environment and there was a famous sociocultural approach to learning was developed by a Russian, named Vygotsky and Vygotsky talked about how it is that cognitive tools were used by everybody all the time in order to accomplish the tasks that they needed to work in.

He included things like mnemonic devices. You tie knots in a piece of string or you tie a knot in your handkerchief, that's a way to remind yourself that you have to remember to go to drycleaner or whatever it is you have to do. What you are doing, is you're offloading some of your cognitive burden, your memory needs to holdback and if your memory isn't quite up to it, you have this other thing that's going to remind you. Nowadays, we have much more complex mnemonic aids, right? With all sorts of electronic devices; but they are doing the same

thing. We are able to sort of offload what could be mental burden, mental task, on to these other aspects, these other tools and we haven't completely externalized, because we still have to remember what the knot meant. So, it's not like my concepts aren't relevant, but my concepts are supplemented. My mental capacities are supplemented by having that knot in my handkerchief.

These sorts of accounts of how it is that we develop social tools extend to the idea that language is also a tool. In fact, for Vogaski, it's 'the most important tool for thought.' Language is not an internal thing, language is a social thing. If there were no other people in the world, we wouldn't talk and talking is something that only occurs by virtue of social interaction. That's how children learn to speak and if there had been only humans, who were complete hermits, who are misinterprets and refused to have anything to do with each other, there wouldn't be language.

So, when people communicate they use words and Vygotsky was very interested in how certain kinds of words, helped the people think in certain kinds of ways. So, one example what he called, schooled concepts or scientific concepts, he called them, that he meant, concepts that you learn in school which referred to abstractions, like democracy and capitalism and communism; these sorts of abstract concepts of the kind thing, kids don't use spontaneously in everyday life.

You don't get your average 5-year-old running around, talking about democracy and capitalism, but in school you learn this stuff and these kind of concepts, Vygotsky said, you as an individual to keep in mind certain more complex ways of thinking, that you wouldn't be able to do, if you didn't have those words, if you didn't have those concepts coming in from the outside, from the external world. So, words and mnemonic devices like knots and other things tend to come together into systems that allow us to do work.

One of the best examples comes from Ed Hutchins who studied battleships. The basic question was, how do the battleship know where it is? Battleship is a big thing and you would think, well, the captain knows where the battleship is, and the captain tells everybody what to do; but it turns out that the captain generally doesn't know where the battleship is.

When you have a big battleship in a little place he was studying how they parked battleships in San Diego Harbor and it's relatively small there and it's important you get it right, because if you are off by more than a few feet, you run into something. So, he studied how it worked and it turns out that there is no person who knows at any given time necessarily, exactly where the battleship is. It's a whole team of people; in fact, they were six people. So, there were only six people and they worked in a certain place. They worked in this place where they have different tasks and between the six of them they gathered the information and do the calculations and use the tools to identify where on the map, on a chart the ship happens to be. And man, they let whoever it is, who is in-charge know, where they are and the person gets to decide what to do.

Those six people have a diverse path, so two of them are actually using instruments that they used to sight landmarks on the shore. So, they have these devices that are capable of taking a bearing to an object on the shore and they are able to tell somebody, okay, that object is at such and such, 250° from where we are right now. Somebody on the other side of the boat is doing the same thing with another landmark on the other side of the ship, and those two people communicate. They talk to people on the inside who have a chart and somebody is looking at the chart and they are actually trying to plot these bearings on the chart. Then you have other people whose job it is to pay attention to other machinery that's inside where they can look at various things. It will tell them how deep the water is and other sorts of things that are in their location.

That group of six people altogether, we would say, they know where the battleship is. The task of navigating the battleship is not an individual accomplishment, it's a group accomplishment. As people are apprenticed into this thing, into this task, they start with one of those jobs and they actually move around until they've learned all six jobs. The people who are only two, three or four jobs into their rotation, don't even understand what the fourth, fifth and sixth people are doing. They don't know crucial pieces of information that you would need to know to really navigate a battleship, but it doesn't matter, because they are part of a system and the system knows.

That system depends on people. People have to know stuff. If there were no people knowing stuff, it wouldn't get anywhere, but if all you had access to were the contents of people's minds, you couldn't navigate that battleship, because it requires tools like the chart, which is a symbolic tool, it's a map. It requires these devices to take sidings, to take bearings, so they can get a bearing on where they are with respect to certain object. It requires language, because they have to communicate with each other. If they didn't speak the same language, they couldn't do this job, because they have to be able to talk to each other. It actually involves the physical layout of the tasks that in the physical layout of the environment they find themselves in, that for instance, if you put the chart way down at the other end of the boat, several decks below, it wouldn't make sense, because people wouldn't be able to communicate easily and they wouldn't be able to troubleshoot if there was a problem.

So, the physical layout of where they are also matters quite a bit. That whole system it's fair to say, knows where the battleship is, but from a cognitive point of view, you couldn't locate all the crucial knowledge in anybody, because it's not there. So, what this means, is if cognition is like this, the jargon word for this approach to thinking about cognition is situated cognition. The cognition is situated in a whole context and it requires that whole context. Another example of this is learning to read. It turns out people,

who we would classify as illiterate; often get along really quite well in the world, because they depend on other queues in order to make sense of what they need to make sense of. So, people have followed the illiterates around supermarkets for instance, and it turns out they are entirely capable of getting a reasonable deal in buying the stuff they need, because they don't attend to the text, they are attending to other queues.

They attend to the colors of things, to the placement of things and other Qs that will allow them to infer what must be the case even though you or I might just look at the label and read it. They can't do that, but they can use some other route in order to get there. So, when children learn to read, it's not just that there's a little reading module that's inside the individual kid's head, and the module is either programmed right or programmed wrong. When you read, you do a lot of different things. As a child, you are talking to your teacher, you are talking to your peers, you know some things about the background of this particular subject matter in the text or you don't, and so forth and so on. You can use devices to infer the meaning of stuff, even though you might not actually be able to read word for word, everything in that text.

Adults do that too. Sometimes we are challenged to read things, but we don't know all the vocabulary or we don't know the genre, and we can do it, but we don't do it by virtue of being able to process, by virtue of our own prior knowledge, every aspect of it. We are making these inference based on other things we know or we ask a question, hey, what does this mean or why put that heading there and I'm depending on someone else to fill in what I lack. What this means is, special education kids for instance, we can help them compensate, not by virtue of forcing them to learn something that in some cases they can't learn with respect to processing text for instance, but by virtue of giving them these other queues to fill in the way an illiterate person might in the grocery store or something.

So, that way of thinking about cognition in learning makes us realize that to help someone learn something, it's not adequate just to reinforce the behaviors of an individual and it's not adequate just to help an individual build better theories or concepts. What you have to do is get a whole system to work better. So, learning therefore might involve nothing to do with the individual's concepts. Not that the individuals doesn't have concepts, of course the individual does, but it could be that learning in this case means giving the person better tools. It could mean that learning in this case involves reorganizing the special layout of how these people see one with respect to another or giving them the right kind of other people whose knowledge complement theirs or whatever it is.

So, in this context the unit of analysis for learning isn't the person. In this context, the unit of analysis is bigger than the person. It's a whole system of people and objects and organization. When that changes, when we would say, somebody has learned, we would say that when the person's participation in an activity has shifted, and all of the sudden they navigate the battleship better and they navigate the battleship better not because of anything I did with the one individual person, but because of some sort of reorganization of the system.

Introduction of new tools, introduction of new people, allowing them to communicate about something we didn't let them communicate about. So, sociocultural approaches to learning also imbed notions of what human nature is like and as you can imagine they are different from the behaviorist and cognitive ones. So, from a sociocultural point of view, I had a professor who always used to tell me about how he was against the lone thinker. So, images of people as lone thinkers, as the famous statue of the thinker sitting up there pondering, that's a cognitivist view of the world. That's an individual and the individuals figuring stuff out on his own or her own and what matters is, whether that individual has the right theory or representations.

Sociocultural approaches are against the lone thinker. Not that they aren't lone thinkers; you can sit by yourself and figure stuff out sometimes, but most things we do in the world don't depend just on what I can think about it. It depends on what I can talk to you about it, and have you help me think about it or what we can use jointly for tools in order to accomplish what we need to accomplish. The notion is that from a cognitive point of view, if you get to the core of humans, if that individual scientist is trying to make sense of stuff, that's what humans at core are about.

From a sociocultural point of view, people are at basis, social creatures who interact with others and objects in the world in order to do stuff. So the basic activity for a sociocultural approach is a set of actions in context, and in context means being in one of these systems that we use to do whatever it is that we are trying to do. That's very different, because when you pull the individual out of that context, it's an artificial abstraction which fails to understand how things work.

So, if my educational philosophy is to take you and try to get you to have a better theory or exhibit better behaviors, and I pull you out of your context to do it and I take you to a room and I'll give you a bunch of tasks and tests and then I stick you back in your context, I may well not succeed, because you are depending on that whole context and I've ripped you out of it and done something to you and stuck you back in without attempting to show how you interacted with everything else there. So, people from this point of view are essentially social and also becoming an autonomous rational thinker, is not the goal. The goal is not to get you to be able to sit by yourself and think something through.

Well, that's a perfectly good thing to be able to do, but that's not my goal. My goal in educating you is to be able to get you to fit into a system where you are able to do your part, so that the system accomplishes what it needs to accomplish. The learning is a system level thing, as opposed to an individual level thing.

This difference is really a fundamental difference of approach, when we think about human nature in this different way. We think of humans as having evolved to use tools to do things. So, from a sociocultural point of view, it's not that people have evolved with mental capacities and physical capacities and then later on they figure it out how to speak, say, or later on they figure it out how to use tools to do stuff or they figure it out how to collaborate with others. As people were evolving, as our brains were evolving, we were developing tools like language, working with other people to do things.

So our brains are actually evolved to work with other people. So, the notion is that, what I am as a biological individual, is essentially tuned to work with others and if you put me a weird artificial context where it's just me, you are not just denying me the opportunity to accomplish some stuff I can do with others, you are treating me in a way that I was not evolved to be treated, because I evolved to talk to others. I evolved to work with others; I evolved to have tools. The reason why the human brain has the form it is, on this account, is because the human brain evolves to speak, it evolves to have language in it and it evolves to collaborate in various kinds of ways.

So, from this point of view, if you take someone out and do things to them like, for instance, give them an exam in a room with no books and no other resources, that's a very weird thing to do. You can do it and get a score out of it, but you are not testing what they really do in the world. What they really do in the world, requires, others, language, tools and other kinds of stuff. So, those were some artificial situations or things that from a sociocultural point of view go against human nature and they treat people in ways that they were never meant to be treated.