Theory
Program Transcript

[MUSIC]

NARRATOR: What is theory and how does theory relate to the various methods of research design? In this video program, Dr. Michael Patton explores the answers to these questions.

DR. MICHAEL PATTON: Let's talk about theory and methods and the theory-methods linkage. Theory is one of those words it's often intimidating to people. It's a word that's often misunderstood in the popular culture. To say that something's a theory makes it sound like there's no evidence for it or people are just sort of making it up or it's just a belief system.

But it's an important and central idea in science and in scholarship. As you engage in theory, what you're engaging in is a system for explaining how the world is the way it is. And so scientists posit theories which explain how something has happened. Why the world is as it is.

So in biology, evolutionary theory explains that there are a variety of species and how those different species came about in adaptation to their environment. There are cosmological theories that explain how the universe came about or how the cosmos operate and planetary theories.

Social science theories explain how human beings operate. Sociological theories explain society, the organizational of society. Economic theories to explain how wealth is created and distributed in society. Psychological theories explain why people behave the way that they do. And those theories postulate certain kind of factors and variables as particularly important.

So a theory says these are the things that you ought to pay attention to. And here's why you ought to pay attention to them, because they make a particular kind of difference in the world.

When you're engaged in research, you're often testing a theory. A great deal of research consists of testing a theory about something. So for example, the great Swiss educational psychologist Piaget formulated a theory about how children develop cognitively and morally. And there is a huge amount of work going on around the world and cross-culturally to see if Piaget's stages of development hold up in different cultures and across time.

That's called deductive theory. And deductive research. It's deductive because the research is deduced from or derived from the theory. And you generate a particular part of that theory and what it would predict and test it out in the real world.

So that Piaget formulates and hypothesizes that at a particular age, based upon his study of his own children and European children, they would behave in a particular way and be able to have certain constructs. Let's say, at age two. Well, let's suppose that you're Nigerian. And you're interested in whether or not that's true for Yoruba children or Nigerian children.

So you use the tests and the measures that have been developed and adapt those to another culture and test out whether or not Piaget in theory holds in Nigeria. Or in Peru. Or in Japan. That is deductive theory.

When you're testing out somebody else's theory-- an Adlerian theory, a Skinnerian behavioral theory-- that people will react in a certain way.

You're involved in deductive theory. Deductive theory typically uses quantitative methods. It engages in experiments. It uses tests and instruments that have been developed to test a theory.
We refer to ways of measuring concepts that come from theory as operationalizing theory. Operationalizing those constructs. We operationalize, we give life to a measurement, when we decide how to find out what that thing is in the world by measuring it, by administering a test, by observing it in some way.

So deductive theories tend to be quantitative. Deductive tests of theories tend to be quantitative. Because methods have been developed to find out if that theory is the true.

And that's called theory confirmation. We are trying to find out if a theory holds for a new population, for a new situation. Because one of the goals of science is to generalize across time and space. That's the highest formulation of science. A generalization that holds across time. That is, it was true in the 1940s and it's true in the 1980s and it's true in 2010s.

And holds across space, which means it holds in Africa and it holds in Latin America and it holds in Europe and it holds in the United States. That is the holy grail of science. To generalize across time and space. So we study deductive theory by doing quantitative experiments in using measures and applying them in new situations that have already been used.

Inductive theory is where we begin not with the theory, but with the world. And we go out and we see what's going on in a particular place. We observe it. We talk to people. We look at what the patterns that are there.

And that typically involves qualitative inquiry. You're going out and you're observing. You're talking to people. You're not testing a hypothesis, but you're asking a question.

What's going on here? What are people doing? How do they explain what they're doing? What are the common patterns in what they're doing?

And so Margaret Mead, the great anthropologist, went to Samoa and interviewed young women, teenagers, and developed some of them is key informants and had them tell her stories to look for the patterns of coming of age in Samoa. And out of that, she developed a theory about how sexual identity emerges.

That's inductive theory because she didn't begin with a theory. She began with the data. She began with the world. And she studied it.

One form of theory contribution is to observe that something's going on that people don't yet have a name for. And to give it a name. When you name something, you're engaged in a theoretical act. Theories depend upon constructs. They depend upon the identification of key variables.

So a formulation of a new construct is essentially saying, in all the blooming, buzzing confusion of the world, there's this part of the world, there's this phenomenon, that people haven't taken apart you have and named and said it's important.

Unfortunately, men have been beating up on women across cultures throughout a great deal of history. But until that phenomenon and its impact was called the battered woman syndrome, it didn't have a construct that could be studied and could be used in courts to say, here's how that phenomenon occurs. And here is the impact of that phenomenon on women who've experienced it. Here's the psychological impact. Here's the physiological impact. Here's why women don't leave.

Understanding the phenomenon of battered woman syndrome came from inductive theory, from studying women who were battered. From interviewing them, from watching their lives. And then naming that and saying there's a constellation of factors here.

There was a student who observed fathers who were deeply involved in the parenting of their children, both their male children and their daughters. And he studied a set of fathers, a group of fathers, who were deeply engaged in upbringing of their daughters, were very good fathers, cared deeply about their daughters, had arranged their marriage and their parenting so they shared parenting responsibilities.
And then, as their daughters moved into puberty and became teenagers, under the cultural cloud of incest
and family sexual abuse, these very affectionate fathers suddenly didn't know how to relate to their teenage
daughters. And so they withdrew. They pulled back for fear that they would do something inappropriate,
for not knowing how to engage the sexuality of their daughters. What do you call that phenomenon?

Well, this person who studied it gave it the name reverse incest. Instead of engaging in sexual behavior,
they pull back for fear of something that they would do might be misinterpreted as an incestuous or an
inappropriate behavior. And they didn't know how to behave.

That's the way inductive theory works. And it comes out of qualitative field work because we don't even
know what we're looking for. We're not beginning with constructs. The theory emerges from the data.

So deductive theory tends to be tested with instruments that have been developed. And you try it out on
some new population and see if it holds. That tends to be quantitative. Qualitative research tends to be
aimed at inductive theory, generating new constructs and what things mean to people.

There is a very important combination of quantitative and qualitative, which is mixed methods where you
use some established instruments, take probability and statistical samples to understand something, but also
have a part of that work that consists of case studies. A common sequence in research is to do field work,
qualitative field work, to turn up something, let's say this idea of reverse incest, that you observe out of
looking at a small number of fathers and their relationship to their teenage daughters.

And then you wonder how widespread is that phenomenon? Well, qualitative research tends to involve very
small samples because it's very intensive interviewing, it's in-depth interviewing, it's case studies. It's very
labor intensive. And so we do very small case studies through a sampling process that is called purposeful
sample.

Purposeful sampling are cases that illustrate the thing you're interested in, the phenomenon of interest. You
get cases that illustrate that phenomenon very well and you study them in depth. But now you've
discovered this thing, you want to know, how widespread is it? So you develop a survey. Fixed questions,
quantitative instrument, develop reliability and validity of that instrument, and now you take a random
sample of fathers with teenage daughters in a community or in a country to find out how many of them
have had these feelings, these anxieties. How many of them of them have exhibited these behaviors vis-a-
vis their teenage daughters?

That's a quantitative inquiry in order to generalize to a larger population. With that, you use probability
sampling or statistical sampling where you take stratified random samples. Because the reason that you
have that kind of quantitative, statistical, probability sampling is to generalize from your sample to the
larger population.

With purposeful samples, small, qualitative case studies, you're trying to understand a phenomenon in
depth and detail. With quantitative samplings, you're trying to generalize. Which gets you closer then to
deductive theory. With mixed methods, you're combining.

So you may begin with a qualitative study to understand something. Develop an instrument then that you
can use quantitatively with a random sample to see how widespread it is. And close off that cycle by
returning to some of those quantitative responses, interviewing people to find out what they meant by their
responses on the survey. And to put those survey responses back in context, back in the larger context of
their larger lives, the other things that they do.

So one mixed method sequence, and certainly not the only one, is to begin qualitative, to develop a
phenomenon. Develop some hypotheses about that phenomenon out of the qualitative work that you then
test quantitatively and then add a qualitative component to bring deeper and richer context and examples to
those quantitative responses.
That's not often something you would do in a single study. That's a sequence of inquiry over a period of time, often by a number of different practitioners. When you're then engaged in combinations of research, you're often involved in using different strengths of these research in what we call process of triangulation.

Triangulation is using multiple methods to find out if the findings are consistent across those methods. Are the testing results that come from quantitative results consistent with and understandable by the qualitative results? The combination of methods often gives us different insights into something.

So let's say that we're interested in how people come to read. And in the phenomenon of reading, the psychology of reading, let's say. Well, we want to know how much people are able to read. At what level they're able to read. For that, you're going to give a reading test.

Tests are designed to determine how much of something occurs. Is it more or is it less? Is the reading level higher or lower? Many of you may have had the Myers-Briggs Personality Inventory. And it tells you how much you're an extrovert or an introvert. How much you are on a particular scale and what your Myers-Briggs Personality Type is. Those are quantitative forms of inquiry.

So we give someone a reading test. And we find out how much they can read. But we also want to know what reading means in their life.

That's a qualitative question. That requires qualitative inquiry. We have to talk to them. What did your parents read? What kind of reading environment did you grow up in? What do you like to read? How you choose what you read? Where does reading fit into your life?

Those are qualitative forms of inquiry. We put together how much somebody can read with what reading means to them, and we have a fuller picture, through mixed methods, of the nature of the phenomenon of reading. Both at the quantitative side, the amount of it that goes on with a particular person or group of people. And its meanings.

What quantitative methods are particularly good for then is those things that are on some scale. That the scale is derived from a theoretical construct where we want to know if people have more or less of that. More or less intelligence. More or less of a personality type. More or less of a skill. And we can measure that quantitatively.

Qualitative inquiry focuses on what things mean to people. Qualitative inquiry is about meanings, about their experience of the world. Mixed methods then combine the question of how much of something's happening with what it means to get a full and rich multi-dimensional picture of that phenomenon.

Deductive theory is a source of quantitative inquiry to confirm whether or not that theoretical hypothesis is true in a new setting and for a new group of people. Inductive theory opens us up to discover things that we haven't yet understood because people haven't paid attention to them. And mixed methods combines these two approaches so that we both engage in testing some propositions that are already out there and opening ourselves up to discovering what they mean in some new ways. And a great deal of the cutting edge research these days is combining both quantitative approaches and qualitative approaches, and therefore trying to build upon the strengths of both a deductive approach to theory and the openness that comes with an inductive approach to theory.

NARRATOR: Dr. Patton continues his discussion of theory by clearly distinguishing the use of theory in both quantitative and qualitative research approaches.

DR. MICHAEL PATTON: Deductive and inductive theories describe overall theoretical approaches to making contributions to knowledge. At a more specific level, within any particular inquiry there are theories about how the world works that guide those-- Skinnenerian theory Freudian theory, Marxian theory, Weberian theory-- that are about the content of a particular inquiry.
But they're also theoretical frameworks about how to study the world. And those derive from different epistemologies, different nature of knowledge itself. They come from philosophy of science and the sociology of knowledge. And as you're engaged in this journey, you may be called upon to identify what theoretical tradition your particular inquiry falls in.

Much quantitative experimental research is derived from a tradition of positivism, which states that the way that you know the world is to be able to concretely observe the world. That only those things you can see, that exist in the senses, with the senses, are real. And that if you can't see it, taste it, smell it, touch it, if you can't measure it, it doesn't exist.

That's a particular epistemology. And it's represented by various forms of positivist theory. In contrast to that, is a theoretical framework that epistemologically is called phenomenology, which says that human beings know the world through their experience. And so that theoretical framework directs you to study the world through the way people attach meaning to the world.

And that becomes the theoretical framework to guide a particular inquiry. Phenomenology-- and there are actually divisions within phenomenology-- guides you in how to engage in the inquiry itself.

Hermeneutics is another area where the theoretical frame of hermeneutics is a way of making sense of what people have written by placing what they have written in a larger societal context. If you're doing a hermeneutical study of the Bible, then you don't just look at those words. You look at the social and cultural context within which the Bible was written.

If you're looking at a policy statement that comes from a political administration, you don't just look at that policy statement without knowing the political, social, and cultural context. That's a form of inquiry, of qualitative inquiry, that is well developed within the philosophy and the theory of hermeneutics. And it tells you and guides you in how you do that.

Ethnography is a theoretical framework about how to study culture. Autoethnography is a relatively new theoretical framework about how you study your own culture. Most ethnography involved European people going into Africa and indigenous cultures in Latin America and in Asia and studying those. But increasingly, people of European descent and Americans are studying their own culture and using their own experience as a part of that.

Well, that theoretical framework is called autoethnography. Like autobiography, which is a study of your own life, autethnography is the study of your own culture. And it provides you guidance with how to do that. So one form of theoretical inquiry and the varieties of theory is to look at the subject matter theory that you're looking at. Behavioral psychology, rational emotive psychology, Adlerian psychology, Freudian psychology, Durkheimian sociology.

The other form of theory is about epistemological. Phenomenology, positivism, hermeneutics, symbolic interactionism, grounded theory. These are ways of inquiring into the world. And they're important for you to know as well because you position yourself within those traditions.