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Hello. Welcome to Sociological Studies. As always, thank you for taking the time out of your busy day to study society. The topic of today's lesson is going to be the scientific method, as well as some research methodologies that sociologists use. The scientific method, firstly, is a procedure that involves systematically formulating questions, gathering data, and questioning hypotheses. So let's start with the scientific method. We're going to take it-- it's eight steps and we're going to take it four by four here.

So the first step of the scientific method is to define the problem. What exactly am I going to look at? What am I going to study? How am I going to go about it? Those kind of things. Just brought, topical, problem defining questions.

Secondly, we want to review the work of others. What have other people done? What have they found on the topic? Are there flaws in their work? Did they leave something out? Do we believe them or do we need to retest? Have they covered the ground thoroughly? Social scientists like to say, don't go out and reinvent the wheel. Make sure what you're doing is unique. So that's the second step.

Thirdly, hypothesize. Make an educated guess about what you're going to find when you research. And finally, four, design a research plan. Figure out exactly how you're going to test that hypothesis, how you're going to find the answers to your questions. There's many ways research can be organized in sociology. And like I said, in the second half of the lesson, we're going to talk about each of those by itself.

Once you've designed your research plan, the next step is to go out and to actually collect your data. It's the most labor intensive stage often. You're actually going out and gathering the raw data according to the research plan that you have in place. So six then, interpret the data you found. You're using the data you collected to shed some light on the hypothesis that you posed in step three. That's the goal.

Seven, then, once you've done all that, explain the findings of your research. Your results and findings are documented formally and they're often published in a journal or else in book form so that way, others can read them and review your work. In the last section of your work and it's also the last step of the scientific method, you want to pose new questions, new questions that come to light based upon your work, so the process can keep going. You might want to point out things that you overlooked or proposed new directions for future research. No one is perfect and science is a process of gradual refinement. It's good to point out areas you may have left unstudied.

Coming back to step four then, designing a research plan. We're really going to hone in on that. You design a research plan according to a research methodology, which is a systematic and coherent plan for conducting research. And there are four main research methodologies in sociology that we're going to talk about-- experiments, survey research, secondary sources, and participant observation.

The first research methodology we're going to talk about is that of the experiment. An experiment is a regimented, highly controlled research method for investigating cause and effect relationships between variables, i.e. Independent variables and dependent variables and a control group. This methodology is used more in psychology. Experiments are actually kind of rare in sociology because we cannot control all the various influences of social life. It's not possible to create an experimental situation in social life, so often sociologists will use what are called natural experiments or experiments that just occur in the process of conducting field work.

Sociologists are interested in the relationship of cause and effect, obviously, but it's often revealed in a different way. It's not often revealed in a regimented controlled fashion. It happens more through conversation, if you're doing qualitative research. So in that way, an experiment is still part of sociology.

The second research methodology that sociologists make frequent use of is survey research. Survey research is a research method where subjects respond to the researchers questions directly, either in an interview or on a questionnaire. There's various types of interviewing. There's in-depth interviewing, which is more unstructured and lasts for a longer time and it takes a more conversational tone. There are written questionnaires that respondents can fill out and respond to and there's also focus groups.

Focus groups is a group of individuals brought together in one room to engage in a guided discussion of a topic of interest to the research. So for instance, when I was doing my research on Couchsurfing and Air Bed and Breakfast, after I had done preliminary one-on-one interviews, generated some insights to test my hypotheses, I called a focus group together, one with the Couchsurfers and one with the people from Air Bed and Breakfast, so I could bounce my ideas off of them and discuss my hypothesis just to make sure that I wasn't completely off, to make sure that I didn't take their words wrongly in the one-on-one interviews. And focus groups are really helpful in this regard.

Thirdly, sociologists when doing research will use secondary sources, which is the use of data collected by other researchers. For instance, the US Census Bureau and the statistical abstracts of the United States are both secondary sources commonly used by sociologists. Also when you're doing library research, when you're in step two of the scientific method, which is checking the work of others, you're relying on secondary sources. You're seeing what other people have already done. And you do this to build your bibliography, to show that you know what you're talking about when you position your research.

Also the use of secondary sources is the primary methodology when you're doing historical sociology, which is a look at past societies and past structures to shed some light on contemporary issues. So historical sociologists will make use of library archives and secondary sources all the time. The idea is to pull a bit from a, pull a bit from b, gather some insights from c, combine them to generate unique and new interpretations of social life, social phenomena. So secondary sources is a vital part of sociological research.

Finally, last but not least, the fourth research methodology sociologists will commonly use is participant observation, which is a research method where people are observed in context going about their daily routines. Using this method, the researcher aims not to influence the actions of the people they're observing, but only to observe. This method is advantageous because you get to see how people actually act rather than them telling you how they act.

For instance, nobody's going to admit to being a racist. It's not like you're going to be like, oh, James, are you a racist? He says, oh, yeah sure, I'm a racist. But if you actually observe James in his behavior, in his natural setting, behaving once he gets comfortable with you, he might do some things that you could observe that divulge that he might be a racist. So this is how this method is advantageous because people can't hide their actions as easily as they can just deceive you with their words.

So what I hope you've taken away is that all research methods have advantages and drawbacks. Sociologists ideally let their research questions dictate the methods they're going to use. Some questions are best answered with participant observations. Some are better answered using surveys. Letting the questions dictate the methods helps the researcher to stay objective.

And in fact, some of the best social science uses multiple methods at the same time. I don't want you to get the impression that I'm only going to use participant observation or I'm only going to use experiments. I can think of, in my MA thesis work, I use participant observation, interviews, as well as a lot of secondary sources. Sociologists will be using multiple methods all the time.

I hope you enjoyed learning about the scientific method, as well as four prominent ways that sociologists design their research or research methodologies-- participant observation, survey research, experiments, the use of secondary sources. Thank you for joining me and have a great rest of your day.