THE LIVELY SCIENCE: THE ETHKNOWORKS CONVERSATIONS

DRAFT

MICHAEL AGAR

magar@umd.edu

Preface: Getting in the Mood

What's a nice reader like you doing in a book like this? I'm hoping that you're here because you're curious about a way to do "behavioral science" or "social science" that will help you figure out a problem you'd like to solve, or maybe you just wonder what those words mean because you're a curious type. Maybe you're a student, new or returning, embarking on a course or a major with those names attached to it, in a traditional academic discipline, or maybe in one of the increasing number of other areas that make use of them.

The point is, I'm writing for readers who are fresh to the concept. This book has a simple premise to get you started. The premise is that research on humans in their social world by other humans is not a traditional science like the one created by Galileo and Newton. It's not that the creators were wrong. Far from it. The ones who were wrong were the historical figures who tried to imitate the way the creators worked, neglecting the fact that dropping balls from the Leaning Tower of Pisa was a very different kind of phenomenon from people making it through the day. Besides, Galileo didn't have to communicate with the balls, while human social research means humans dealing with humans means the research itself is a human social world. Besides, Galileo didn't have to worry that the falling balls might complain about being dropped 185 feet.

All sciences make their case based on evidence according to the rules of some logic, and then to try and prove the claim wrong in order to show that it might be right. But once a human makes other humans in their social world the scientific focus, all sorts of problems come up that one doesn't have with material objects, or with most forms of

life, though the problems start to appear the closer the animal gets to Homo sapiens. Chimpanzees, it turns out, are a lot harder to research than ants.

It's an old argument, a couple of centuries old now, that human social science is a different breed of scientific cat, but this is *not* a book with broad and deep coverage of that history. I use it as a premise to be summarized, not a debate to be re-hashed yet again. This book will select a few key figures and a few key concepts to outline why an alternative science is necessary and what it looks like. It is an aerial photograph rather than a close-up. The concepts represent enduring themes that have come up repeatedly through the decades. Reading about them here will be more like walking through a home to get a general feel for it rather than unscrewing the light switch in the living room and taking it out of the wall to see why it doesn't work.

Nor is this a methodology book. Methods are strategy and tactics for a professional player. This book is about the history and the nature of the game. I've written a couple of methods books over the years. My audiences were professional colleagues or colleagues in training. I might write another one some day. But this book isn't about how to do something in detail. It is about how to form a question and think of ways to answer it. The hundred dollar word is *epistemology*. It's not a common word used around the house, as Groucho used to say on his TV show *You Bet Your Life*, but it's a straightforward word that means the nature of knowledge and how it is acquired. The problem this book zeroes in on is, the behavioral and social sciences adopted the *wrong* epistemology, that of the early physics and chemistry lab.

This is also *not* a book about "qualitative research." It is ungrateful for me to say it, because I personally profited from the exponential spread of the concept, but when I

think of the term now the urban sprawl and incoherent growth that produced Phoenix come to mind. The only consistent difference I can find between "qualitative" and "quantitative" is at the level of *data*, the former meaning, more or less, propositions, and the latter meaning numbers. That difference is not what I'm dealing with here. Traditional behavioral/social science can use propositions, and qualitative science can use numbers. I've never done an ethnography without numbers in it.

And speaking of ethnography, this is *not* an anthropology book. My degrees are in anthropology, and as an undergraduate I worked for a year in a small village in South India like a traditional ethnographer. But courtesy of the Vietnam War I started an on-again off-again career working with heroin addicts in the U.S., a bit of kismet that knocked me off traditional disciplinary trails for all time. My background as a language-oriented ethnographer has a lot to do with what I write in this book, but what I write isn't an effort to preserve the academic purity of traditional Ethnography 101. Instead, it is the result of decades of experience working on human social research questions, usually problem-oriented, in numerous different kinds of settings, academic, applied, community, organizational, and just plain hands-on practical.

Mostly this book is driven by the last 15 years or so, starting with the day I left the university to work on a variety of different projects in the so-called "real world," a place I have tried to locate for years without success. Several of them will be used as examples in the book to come. The variety is what taught me to think and speak in a more general way about an alternative human social science. That alternative was why people sought me out, and the reason they sought me out was because the traditional way of doing human social science had cost them a lot of money and produced little of any use.

Thanks to them, I got better and better at describing the alternative, how it was different, and what it could and couldn't do. This book is a summary of what I learned, together with a selected look back at the history of human social science to find out that what I was learning had, as usual, already been said by many people a long time ago.

My thanks to … (acknowledgements).

Chapter One: Behavioral/Social Science: An Oxymoron?

In late 2010 the American Anthropological Association considered revising their mission statement to eliminate the word "science." Earlier that same year, Republicans in the House of Representatives had introduced legislation to eliminate funding for "behavioral and social sciences" at the National Science Foundation because they are "often more controversial and less directly related to NSF's core mission." It is one of the few times that the AAA and the Republican Party have ever agreed on anything. Anthropology is uncomfortable being called a "science," and the Republicans are uncomfortable including it or any of its behavioral and social science kin in a national "science" foundation.

What is the problem here with using "human," "social" and "science" in the same sentence?

It's not news, this problem. There are the old stories, like the one about President Harry Truman, who told the press he wanted a "one handed economist." When you asked them a question, he said, they always replied, "On the one hand this, on the other hand that." Economists, they say, are the most scientific of the human research lot, but then again, they're the ones that inspired Thomas Carlyle to add the adjective "dismal." The general sentiment was well expressed in the famous line from the poet W.H. Auden, "Thou shalt not sit with statisticians nor commit a social science."

And there are older stories still. Goethe wondered how Newton could claim that the spectrum said all there was to say about human perception of color, and Hegel wrote about history, about how time was a dimension of the human situation that the second

law of thermodynamics couldn't handle. Some say we can even go further back, to Protagoras, famous for his saying that "man is the measure of all things." He is often credited as the first Sophist, a movement whose reputation only feeds the conflict between the appreciation of human social situations, on the one hand, and the for-hire manipulation of words absent any commitment to truth on the other.

None of this inspires a great deal of confidence in human social science, not in the accuracy of what it has learned nor in its possible uses. And it all started out on such a positive note, too--literally a "positivistic" one. It began with optimism born of Newton's discoveries. As Alexander Pope's epitaph for his tomb in Westminster Abbey concluded, "God said let Newton be, and all was light." If all the light was in classical physics, who but a disreputable sleaze would hang out in the dark? The rush was on to make human social science as Newton-like as possible.

August Comte, whom many would consider the founder of sociology in the early 19th century, called his work "social physics" to honor the master. His "positivism" was actually an end-state of history, the development of a sociology that included the preceding tradition of physical science--empirical, quantitative, guided by hypothesis-testing experiments. Positivism, he argued, would solve the social problems of post-revolutionary France. That didn't work out so well either.

Human social science has always been a problem child. In the eyes of those outside the profession, the famous quote sometimes comes to mind, that human social science is "the painful elaboration of the obvious." Worse is the phrase of those who shift their gaze from some new technological marvel to a social survey, that the whole enterprise is "pseudo-science." And within the professional human social research world,

a clear caste system ranks its members. Experimental methods and mathematical equations at the top; the words and actions of people in their everyday lives at the bottom. The more a human social science can look like a mathematical experiment, the higher the prestige aura around it, the more authority and power it carries in the public mind.

This is a two hundred year old mistake. That is a premise of this book. The reason it is a mistake is, human social science tried to be the *wrong kind of science*. That is the second premise. The third premise is, a different kind of science has been waiting in the wings for a couple of centuries and it's time to move it from the margins to the center, because it grounds human social science in what it is supposed to be about--us, in our everyday lives, for better or for worse, 'til death do us part. And the fourth premise: It doesn't *replace* traditional science; it *includes* it as one actor, sometimes a bit player, in a much larger story of how humans describe and explain other humans in a scientific mode.

"Data" is a construction born of an interaction between scientist and world. Don't call that by the obsolete term "postmodernism." It's early 20th century physics. The problem for human social science is, it usually tries to construct data in a way that imitates as closely as possible a traditional science laboratory. What that boils down to is a simplified unreal situation isolated from real life that is designed and controlled by a researcher.

Our real lives usually aren't like the frameworks that the scientists shoehorn us into. We can't be described and explained absent some sense of our beliefs, feelings, desires, and purposes. We live in social webs that influence us, as in the famous "theorem"--a bad metaphor if ever there was one--of W.I. Thomas in 1928, that if people define a situation as real, it is real in its consequences.

The argument in this book is, the effort to imitate the science laboratory, literally or metaphorically, means that human social science has to distort if not destroy the very phenomenon on which a human social science has to rest in the end, us, in our everyday lives. As the book goes on, we'll see that there can be research moments when oversimplification and control are the right thing to do, but it has to happen in the context of a profound understanding of those everyday lives.

That fact doesn't mean you can *not* do science. It *does* mean you have to do science in a different way, a way that looks chaotic if not psychotic from a traditional science point of view. But there are other ways to get the science job done with all the critical ingredients, namely, use evidence organized by logic to reach a conclusion that is then tested by trying to prove it wrong. The problem, the one this book will try to solve, is how to make this alternative way of doing science clear so that an interested reader can see how it works.

A subtext to this book will be a recent historical wave that aimed to do exactly that, a wave usually called *qualitative research*. There is indeed a link between the two hundred year old history of an alternative human social science--the foundation on which this book rests--and the more recent qualitative research story. But the exponential explosion of the qualitative field and the promiscuous use of the term have muddied the story considerably. Comte-like positivists can use propositional data and call their research "qualitative" now. Some "qualitative" researchers do projects that have nothing in common with the concept of "science" used in this book.

The only clear meaning of "qualitative" versus "quantitative" at this point is "propositions" versus "numbers." But this isn't a book that prescribes what data a human

social researcher *should* use. This is a book about human social research that assumes a researcher will use numbers, propositions, and any other kind of information he or she can find that helps learn more about a particular human social world.

Human Social Science?

"Human social science" is an odd-looking phrase that is one of three that will occur so often in this book that it would be good to talk about them now. The reason for "human" and "social" is this: *The two terms label different levels of organization*. Some traditional social sciences, like economics and psychology, tend to focus on the "human" level, that is, the level of individuals. Others, like anthropology, sociology and political science, tend to focus on the "social" level, that is, what groups of those humans are doing. And then there are those who focus on both levels at the same time, describing how individual actions and social groups mutually influence each other. Some subfields of human social science rose up with an interest in exactly this connection, subfields like social psychology, say, or psychological anthropology, or institutional economics.

I'll deal with this two-level problem later. For the moment, the book will worry about *any* kind of science where both researcher and "object" of study are human "subjects," whatever the level of focus, and they will be lumped together as "human social science."

There is yet another level, the biological, and another set of terms that blur the levels, like "biosocial" and "biocultural" and "cognitive neuroscience." Here and there in the book that lower organizational level will come into play. By and large, though, the

focus here will be on individual humans in their social world, *as they experience it*. And the argument in the book will be, those levels are where the descriptions and explanations of a human social science must originate and return to at the end of the day.

The next two phrases in the list of three I will use so frequently that I am going to turn them into acronyms. The mainstream human social science tradition that came out of the Newtonian era is often called the "received view." It is called that because it is like a caught pass in football with nothing left to do but to run for the goal. The core premise of the received view is that any science, whatever its focus, is at base the same. So what is science? Here is what my New Oxford American computer dictionary says it means:

> the intellectual and practical activity encompassing the systematic study of the structure and behavior of the physical and natural world through observation and experiment.

Notice there's not a lot of human and social in there. But never mind. Let's take that definition and see what it turned into in human social science.

I'll name this received view "behavioral and social science." The phrase is a common one. It has been around for decades. I'll give it an acronym for ease of reference in the rest of this book. Let's call it **BSS** for short.

Don't look at me. I didn't invent the phrase that "BSS" is based on. In fact, at Maryland they call the administrative unit that includes the human and social sciences "BSOS" for short. You can imagine the wisecracks from my colleagues in the so-called "hard" sciences--to use the usual phallic metaphor--not to mention others in business and

engineering. The "OS" was sometimes interpreted as "out of sight." The "BS" part you can guess.

How well does BSS fulfill the definition of science? At first blush, it's science all the way down. It marches to the tune of the "experimental method," as first outlined by John Stuart Mill in *A System of Logic* in 1843. I'm going to talk about him at length in the next chapter. So prestigious is this method in the world of science, so often is it held up as the Holy Grail, that research centers like the National Institutes of Health call it "the gold standard," as do many other places. They still do, in spite of the fact that President Nixon abandoned the real gold standard in 1971. If it's not a dead metaphor, it's at least deep-frozen.

Here's a stripped-down version of how BSS converts human social behavior into gold. Real examples are of course more complicated than this sketch, but I think most BSS adherents would agree that what is to come catches the heart of it, or at least some of its vital organs.

First, imagine a statement that you want to test scientifically. It is a *hypothesis*. Where does a hypothesis come from? A BSS scientist would say it comes from a *theory***,** which in human social science usually means a description in ordinary language about how some part of the human social world works, from the perspective of a BSS scientist. A hypothesis is a statement that must be true if the theory is true. If it doesn't hold up when tested against some *data*, then the theory is *falsified*, just like the philosopher Karl Popper said science was supposed to try and do. If it isn't falsified, then the theory still stands. Notice that a hypothesis, and therefore a theory, is never proven in any simple way, not according to Popper. They just keep surviving test after test, or not, as the case

may be.

"Systematic" in that dictionary definition of science quoted earlier means that the test of a hypothesis must be conducted "according to a fixed plan." So what is the fixed plan?

This is where the founders of traditional science revolutionized history. The fixed plan in the Middle Ages meant check it against the papal authorities in Rome or the Aristotle scholars in the university. No more, said the new scientists. Let's take a first-hand look at what the world is actually doing instead of looking it up in Aristotle or the Bible to see if what we say is true corresponds to what they already believe. The new revolutionary plan for testing ideas was called *empirical*, or "verifiable by observation or experience."

And so began a conflict between those who look to the world for information and those who preach how the world must be because they think it is so in the privacy of their own minds. The conflict is as current as today's headlines. An early famous case was Galileo, who said that, given all the observations that had been made, the sun, not the earth, had to be at the center of the universe. After his trial by the Inquisition he spent the rest of his life under house arrest, the advantage there being that he got a lot of writing done.

Science has to be *empirical* and *falsifiable*. All science has to be like that, human/social oriented or any other. No argument against those fundamentals anywhere in this book. In this sense, all science *is* the same. The argument in this book is about what counts as adequate description and explanation, what counts as data and how it is gathered, plus the fact that a human is doing the gathering from other humans. BSS,

following the laboratory model of the early science founders, has to simplify and control data, usually into something that resembles nothing that research subjects would ordinarily do, and then pretend the scientist has no influence on what happens.

Science loses touch with its phenomenon because BSS scientists look at subject worlds only as permitted in a design of their own making. What happens in BSS research and what happens in life usually have little if anything to do with each other. Sometimes, given a narrow research question, this is the right way to do business. Examples will come up in this book, and by the end BSS will be alive and well but in a much larger context--understanding the human situation in general.

Consider how a BSS researcher designs an empirical test. One simple kind of hypothesis, the example I'll use here, claims a relationship between two things that can vary. A variation in one changes with a variation in the other. The more the X the more, or less, the Y. The higher the household income, the more likely it is that the children will go to college. The longer one is without work, the more likely he or she will abuse alcohol. The more expensive a gallon of gas, the fewer miles people will drive per week.

Where does a hypothesis come from? From a *theory*. In BSS a theory is usually a group of related generalizations. In the old days one spoke of "law-like" behavior, the lust after "law" an echo of the envy of the laws of motion. What theory lies behind the simple example hypotheses listed above? College? There is a theory in there that assumes the traditional American value of college as vehicle for economic and social mobility. It is also a luxury item that requires disposable income. Alcohol? A theory that unemployment produces psychological stress and that alcohol relieves it. Gas? Economics 101, raise the price too high and fewer people will buy.

The distorting assumptions? Higher education is a good thing, an assumption hotly debated in today's media in terms of declining academic quality, student debt, and lack of employment. Excessive alcohol use reduces stress? Not the first thing that comes to mind for anyone who has worked with alcoholics. Gas? How much can consumption be reduced in a world of widely distributed locations that one has to visit every day for work, school, and shopping without transportation alternatives?

Trying to prove oneself wrong is important in any science. No argument in this book. In fact, at this point we can include science as an example of the general value of critical thinking. But what if you don't have a theory or a hypothesis? What if you just want to explore how the world works? When they asked Einstein how he came up with the theory of relativity, he said he imagined what it would be like to ride around on a beam of light. Was that a hypothesis? And he was just dealing with particles. What if the particles had their own ideas of what they were doing and he had to explain that? He'd have to get to know them and their true inner feelings first. Is that a hypothesis?

The BSS received view notion that science is all about tests of hypotheses from prior theory is incredibly narrow when set against the human social worlds it means to describe and explain. In fact, it completely ignores the *describe* part. It's incredibly narrow when set against the history of science, period. It takes the final part of a scientific voyage and turns it into the starting point. You don't test a hypothesis until you have an idea, and you don't have an idea until you go forth into the world and engage the phenomenon you're interested in.

The received view turned into a boring travel guide with little exploration, discovery, creation, or imagination. It reminds me of the old ad--"There are no surprises

at a Holiday Inn." Just shake a theory until a hypothesis falls out and test it. The hypothesis is built out of concepts that the scientist brings to the table. What concepts do the subjects bring? Who knows, all they get to do or say is what the scientist sets up before they arrive. The BSS scientist picks the theory and formulates the hypothesis in the privacy of his or her own discipline.

This is bad enough, but it gets worse. Next come the details of the method, the "observation" or "experiment" part of the definition of science, the empirical stuff. First, of all, a BSS researcher has to figure out a way to *measure* the *variables*, the variables being the things that vary in the hypothesis. Measurement means, figure out a way to assign a *number* to the variables that represents their magnitude, the reason they call it *quantitative* research. One of the variables is called "dependent." It is the one to be explained by the other variable, which is called "independent." In one of the earlier examples I mentioned, family income is the independent variable that might explain the dependent variable, whether or not the kids go to college.

Real science, according to BSS, has to be based on numbers. The law of gravity wasn't a song or a punch line to a joke; it was an equation. As Galileo said:

> Philosophy is written in this grand book — I mean the universe — which stands continually open to our gaze, but it cannot be understood unless one first learns to comprehend the language and interpret the characters in which it is written. It is written in the language of mathematics, and its characters are triangles, circles, and other geometrical figures, without which it is humanly impossible to understand a single word of it; without these, one is wandering around in a dark labyrinth.

BSS loves this quote. Never mind that Galileo speaks of mathematics and geometry, not arithmetic and statistics. Never mind that "measuring" mass and velocity is a tad different from "measuring" beliefs, values and desires. Never mind another famous Einstein quote, that not everything that counts can be counted and that not everything that can be counted counts.

Once measurement has been figured out, BSS worries about the *sample*. For now, the important thing is that there must be some fixed plan--that word "systematic" again--that guarantees that the BSS researcher didn't just pick examples that would make the hypothesis look good. In a BSS dream experiment the sample is *random* with respect to the entire population of people that the study means to explain and large enough to accurately *represent* it.

Finally, BSS will also have a fixed plan to gather the relevant *data***.** Two classic kinds of plans for BSS are the survey interview and the small group experiment. For example, consider the hypothesis mentioned earlier once more, that higher income households are more likely to send their offspring to college. Here are two (over)simplified versions of how to gather the numerical data.

For a survey, pick a random sample of households with children over 18, design a survey interview with questions about household income over time and educational/occupational status of their children over time, then phone them or knock on their door and fill in the blanks. A "time-series analysis" could be applied to the data and I'm guessing it would produce all kinds of complicated and interesting results that would lead to secondary analyses. Think of the growing disparity of wealth and the decline in

college support as recent examples that would muddy up the picture.

For an example of an experiment: In one condition, the child is offered a full scholarship including housing expenses. In a second condition only tuition is covered. In a third condition the family has to pay for everything. A random sample of parents is selected so that all income levels in the area will be represented. The hypothesis is obvious--the more the support offered in the experiment, the more parents in the experiment will say they would send the kid to college. Then the experimenter will do an "analysis of variance," a statistical technique to see what else might explain the differences, like maybe whether or not the parents went to college, assuming that question was also asked.

In the end, the data of whatever type are entered into a computer for statistical analysis using software packages like SPSS or SAS. I'm not going into the details of what those acronyms mean, or what the null hypothesis is, or what counts as statistical significance, or any of the many other details that I've ignored in this broad brush-stroke overview of mainstream BSS research. The point for now is simply that the statistical results will be interpreted by the researcher for how strongly the hypothesis is supported, or not, as the case may be.

This is more or less how BSS goes. Its results are usually boring to anyone but colleagues who are disciplinary insiders. It had better be interesting to them, because they are the ones who--through "peer review"--control access to grants, journals and promotion and tenure in the traditional BSS research world. This all makes BSS look more like a laboratory, but less like the human social world it claims to be about. That is the fundamental flaw in the long history of BSS that needs to be fixed.

The Path Not Taken

When "science" expanded into the human and the social, it turned "human social science" into BSS and little else. BSS grew into the statistical test of quantitative hypotheses derived from prior theory. Data for the test relied on "instruments" that assigned numbers to structured questions or researcher-designed experiments, with little if any question about the way a phenomenon of interest actually took shape in the lives of research subjects, if the phenomenon that the theory claimed was relevant to those lives mattered to subjects at all. The research results might have made the hearts of colleagues soar like an eagle. But I always imagine the subjects, or those research consumers who were interested in learning more about them, wondering what the researchers had smoked for breakfast.

Over a couple of centuries BSS "received view" science became a rule that the *only* way a human social scientist could do research would be to strap a project into a BSS straitjacket. It was like telling someone that the only tool they could use to build a house was a hammer. It's a useful tool, but extremely limited in what it can do, and a poor choice for most of what needs to be done.

Many have written about the naked BSS emperor, starting in the 19th century. You will meet a few of them in the rest of the book. And there have been many, many more than just the ones I mention here. Some produced volumes along with generations of followers that are alive and well to this day. But the purpose of *this* book is not to review the entire history of proposals for a different kind of human social science that is more

realistic given the nature of its phenomenon. The purpose here is to take a few linchpins of that history and organize them into a coherent way of thinking. Like Newton said—he wasn't all bad—I'm going to stand on the shoulders of giants. The trick here is that there are a lot of giants involved so it'll be more like walking across a field of shoulders and trying to keep my balance.

I need one more acronym in addition to BSS before I start, one that can refer to the alternative kind of science under construction. It has had many names, not all of them suitable for a family book of this type. Dilthey, discussed in Chapter Three, called them the "Geisteswissenschaft," but that's hard for English speakers to dance to. I'll call them, simply enough, *human social research*, and I'll refer to it with the acronym *HSR*. So there's behavioral social science or BSS, and human social research or HSR, both of which are kinds of human social science.

I'm going to set the two up as separate but unequal ways to do human social science in the first part of the book. As the story moves along, the two will start to talk with each other. Rather than two opponents, the argument will evolve to show that HSR is the more general framework for human social science that can include BSS, though not necessarily so. BSS, on the other hand, is a perfectly reasonable thing to do, but without HSR we can't know why its question is important or whether its results explain anything about how the human social world actually works. In order to challenge this argument at the end of the book, one of the most famous BSS studies of all times, one I admire, will be described-- Stanley Milgram's experiments where ordinary people jolted each other with lethal doses of electricity because a guy in a science lab told them to. Milgram was a genius, but by the end of the book it will be obvious that his "experiment" was actually a

BSS moment in a broad and deep HSR context.

To begin, though, I'll start by foregrounding the differences. The problem with BSS, in a nutshell, is that it imported the model inspired by the early physics and chemistry laboratories as the *only* possible model of how science worked. In this book I'll start with a group of 19th century thinkers who questioned this assumption. They argued that one human researching some others was a different breed of scientific cat, and they left a treasure trove of ideas for how to feed it. Their ideas didn't die. On the contrary, they survived on isolated academic and practical islands until recent times. Recently they have been dusted off and widely distributed because of the "qualitative" research boom.

The rest of this book will gradually develop HSR as a human social science. Some BSS types use the obsolete word "postmodern" for any criticism of their traditional monopoly. That is not what is in play here. Some HSR types, in turn, call BSS the perfect example of "scientism," with all the connotations of racism, sexism, and classism lumbering along in the semantic background. Not in this book. But the argument that HSR isn't your grandfather's chemistry set makes perfect sense, and that is the starting point for now.

Just as a preview of the book, consider some of the obvious ways that HSR will be different from BSS, given the sketch of how BSS works described earlier.

1. With BSS, a hypothesis is framed *before* the research starts and it can't change. In HSR a hypothesis changes as more is learned during a project, and new ones appear well *after* the project starts.
2. A BSS hypothesis is made up of "independent" and "dependent"

variables. In HSR there aren't any independent variables. There are patterns that link many of them together in many different ways.

3. Where does a BSS hypothesis come from? Usually from a single academic theory. HSR will probably use several theories and make up a few more as the case requires. BSS is theory testing; HSR is also theory-generating.

4. BSS is empirical, maybe observational, like the earlier definition of "science" requires, but only within the limits of an interview or experiment designed and controlled by a researcher. HSR is open to information from any source, researcher designed or not, and methods change and get created as the research progresses.

5. The BSS model requires assumptions like *standardization*—every subject sees the interview/experiment in exactly the same way—and "*ceteris parabus*"-- nothing varies *systematically* except the variables in the hypothesis. HSR, in contrast, accepts that neither assumption is ever true in any human social world.

6. To convert a human moment into a number, BSS assumes the number means something that it doesn't necessarily mean to research subjects. HSR focuses more on patterns that mean something to subjects rather than numerical measurements of variables.

7. Both BSS and HSR worry about sampling, but BSS designs a sample before a project starts and HSR modifies it as more is learned about variation among subjects in their world.

8. Most statistics include prior assumptions about the variables, the

samples and the population that BSS usually doesn't investigate. In fact, statistical software doesn't make it easy to examine a raw distribution of data. Worse, some statistics assume a normal distribution when in fact the variable of interest might be distributed in any number of other mathematically interesting ways.

9. In BSS, strange assumptions about research subjects are made to fit a theory's premises. Consider the classic economics assumption, a rational actor free of social influence acting on the basis of perfect information. Imagine an obsessively greedy Spock-like figure checking E-Trade on the Enterprise computer. HSR modifies assumptions about subjects and their worlds based on what is learned from them. HSR subjects are more complicated and life-like in research reports than BSS subjects.

10. BSS aspires to a goal of *objectivity*, the notion that the researcher and his or her biographical and historical context have no influence on the research. HSR rejects this goal as delusional when humans research other humans. Their science is, at its base, *intersubjective*, neither "objective" nor "subjective" in any simple way.

As I said, this is only meant as a preview. Notice how most everything on the HSR side of the comparison describes characteristics that the BSS received view would describe as "unscientific." The argument in this book is that these characteristics are not unscientific; they are signals that a *different* kind of science is in play, a science that adapts to the realities of a human social research done by a human social researcher that

is about human social worlds, but one that retains high-level characteristics of science like falsification, empirical data, and systematic presentation of results.

HSR, BSS, and the Difference When There's a Problem

As I write this, in 2011, I am making a living in part by working on projects driven by a popular interest in more, rather than less, HSR type human social science. One project involves a biological ecology group in New Mexico that decided to include the Albuquerque metro area as well as their remote rural site south of the city. Cities include a lot of people, and biological ecologists, deep down, regard humans as an undesirable invasive species. They have a point. So they called me in to add human social science to explain how the urban featherless bipeds manage to have such a disproportionate impact on their environment.

The second project involves a group of artificial intelligentsia in Los Angeles who want to put more information into computer systems designed to teach a second language. The past tense and different ways to say "where is the nearest police station?" only get you so far. They see "culture" as the answer to this problem, though it is an abused concept that we'll get to later, but what they mean is that the world of the speakers of a language should somehow be included in language training. Years ago a colleague told me he took a Spanish course and, when he arrived in Mexico, all he could remember was the sentence, "the bear neither dances nor sings." It didn't help much in his work.

The interesting thing here is, neither of these projects follow the BSS schema

outlined in the previous sections. Both projects invited me to do human social science. Neither asked me to design BSS research. Why is this?

The harsh and arguable answer is, BSS just hasn't contributed much, though many of its practitioners, from the founders described in the next two chapters to the present, announce the noble goal of helping make a better world. All that positive Enlightenment promise, now viewed through the rearview mirror--all that positivism with which Comte jump-started sociology to make post-revolutionary France run like a well-oiled Peugeot. Was it all just smoke and mirrors?

This collapse of Enlightenment optimism in human social science left us with the gloomy story that produced President Truman's joke and Auden's line of poetry, about how human social science misses the point, glued in place as it is by academic careers and the need for ratified "scientific" certainty. But then comes what feels like a new era, things pick up again, not heading for a happy ending like a Hollywood movie, but an ending that shows the "arc of character." The protagonists learn from the crisis and become more comfortable with their limits, getting on with life in a less naïve but more accepting way. More French NewWave than Walt Disney.

I think this is what's happening today with human social science. I've seen the change in my own lifetime, now well into what I learned to call "the third age" in Spanish, namely, when you get past sixty. I started out, in the "first age," as a cultural anthropology major in the 1960s when the Vietnam War landed me in a hospital for the treatment of heroin addicts. As a professional, not as an addict. The most polite question from researchers and practitioners and administrators at the time was, "How is what you do different from journalism?" They meant, "what you do obviously isn't *science*, so

what in the hell is it?" And "journalism" was often prefaced with "mere." The irony, at the time, was that the same skeptics were cheering on Woodward and Bernstein as they uncovered the Watergate Scandal.

Times have changed. Now I make a living helping out groups who start by telling me, "We tried science and science didn't work. (They mean BSS.) We need a better way of figuring out the human social part of the problem we're interested in." The ecologists at the University of New Mexico don't have a hypothesis. Neither does the second language group in Los Angeles. They want to know how to make something work, how to understand and then change something that goes on in the human social world, with any luck for the better. Hope springs eternal, all the historical evidence to the contrary notwithstanding.

Here's one more recent example from my own work. An outpatient chemotherapy hospital cares about their patients and wants to reduce the average amount of waiting time. They try statistical analysis of records, surveys, time and motion studies, computer models, god knows what else. The results? They could only shave a few minutes off of several hours.

They ask me for help. I hang around, listen to patients and front line staff, read a lot of things, and do the kind of different unscientific-looking human social research that this book will be about. It turns out that patients have different ways of looking at waiting time with a common thread among them. The common thread is uncertainty, and how much better things go if you know *why* you are waiting, both in terms of what's going on with the organization and what's going on with your disease. So we plan a system to address that.

Even though not much can be done about the *number* of minutes, a lot can be done about reducing the *uncertainty* of those minutes. The big chiefs like the plan. It's almost a happy ending, given that stories about cancer tend not to have one, but then the chiefs shift their priorities to hospital-borne diseases, so the plan goes on the shelf. But still, the case makes the point.

The point is, human social research is more accurate and useful if we stop pretending that it is a laboratory science. No more pretending that you control all the variables and then ignore all the feedback loops and then finally watch someone and ignore the fact that they stare back and ask what you think you're looking at. The most important thing learned in human social science is probably going to be a pattern rather than a number, a pattern that a researcher didn't know existed until he or she was well into the project. The best way to show an audience what was learned will probably be a metaphor rather than an equation. And, most important of all, the way a researcher learns will be in fits and starts, the learning filled with surprises and new concepts that appear in unplanned ways well after the project starts.

The HSR alternative can be systematic, guided by evidence, logic and falsification, just like any science. But it will *never* resemble a carefully scripted step-by-step test like a laboratory experiment. HSR will be more about getting the job done than it will be about how to do it in micro-managed detail.

Human social research, HSR, is a *different kind of science*. Good human social science can include numbers, surveys, even the results of the proverbial college undergraduates performing some task in a psychology lab. And during the purest HSR study, moments will come that call on the purest of BSS experimental logic, as we'll see

in the next chapter. Human social science can *include* these things, but in the end they have to grow from and then re-connect with a more comprehensive investigation of the human social world.

Read a report of traditional human social science and nine times out of ten the most interesting part will be in the "discussion" or "interpretation" section, a section at the end based on the imagination of the researcher. At times it is well done and rings true and makes sense out of a mind-numbing sequence of tables and charts. The material in that section, the material that can make sense out of the research in terms of how the human social world actually works, is the part that needs to be at the *center* of human social science, not a flight of unsupported fancy tacked on at the end.

It drives me crazy, even though I've done it myself, when a group of people involved in decision-making cite all kinds of BSS data, but then the pivotal moment that tips the decision one way or another centers on a story about what the neighbor said yesterday or a documentary a panelist saw in the hotel room the night before or a theory the taxi driver presented on the way in from the airport. No disrespect to taxi-drivers—they've done quite a bit of HSR research.

During a study I did years ago, used as an example later in the book, I worked on how deregulation was affecting independent truckers. I attended several Congressional hearings. Witnesses showed many graphs and tables. Then a hush would fall over the room as the independent trucker couple walked in, he in a plaid flannel shirt, she in an off-the-rack dress from Penney's. The "people" had arrived and their words were sacred. In the end, it being Washington, neither the graphs and tables nor the words of the people made much of a difference. In that context the final decision was made behind closed

doors of well-supported lobbies and re-election committees. Believe me, I wish I were only indulging in cynicism here.

"Data" linked to real human social worlds is where human social science has to start and has to finish, as long as that human social science wants to claim that in the end human social worlds are what the science is about. The way to fix BSS tunnel vision is, step one, realize that there is a different kind of human social science, and, step two, make it clear how it works. That's what this book, *The Lively Science,* is all about.

Where Titles Come From

The kind of human social science I want to describe here is best understood as a *way of learning, specifically designed for a human interested in figuring out how some others live their lives, followed by a systematic presentation of the results that can be evaluated and challenged*. This different kind of research is in the ascendancy now, the more so in areas where research is driven by some problem that actually happens in the world with the purpose of taking action. Broadly, I think human social science is changing because of widespread interest in putting it to use and the concrete results of doing so. It is fascinating to speculate on why this shift is underway, and I'll do some of that later in the book.

The main title of this book is *The Lively Science***.** It's a play on the opposite of the "dismal science," as Carlyle called economics back in the 19th century, a century I'm going to dive into for the next two chapters. Supposedly he was inspired to call it "dismal" after reading Malthus' cheery forecast that population growth would outstrip

food production and we'd all starve. The opposite in those days was "the gay science," meaning "life enhancing knowledge," used by Nietzsche in 1882 for a book title. The original translation into English was "the joyous wisdom." In 2011 "gay" is most frequently used to mean sexual orientation and "joyous" sounds like a Christmas card, so "lively" seems like a better translation. The point of the book is that human social science has neglected its phenomenon of interest, ordinary human *lives*.

The subtitle of this book, "The Ethknoworks Conversations," is written with tongue firmly epoxied in cheek. "Ethknoworks" is the name under which I've done business since I left the university in 1995. At the time, I bought pipe tobacco from "Earthworks" and took my car to "Autoworks," so the "works" part seemed right. A friend told me to put the "k" in there to prove I was a knowledge worker.

But the subtitle does convey two serious messages. Here is the first. Many--many--have written about HSR in one form or another. I think what I've added here is a clearer description of *why* HSR is necessary with a follow-up discussion of logic and meaning that describe the *how*. At least I hope it adds something. I owe my ability to write this to the many projects I've worked on and workshops I've given for people who asked me about what I do and how they can evaluate the results. Those conversations taught me how to describe HSR in ways the classroom never did. I'm grateful to all those project colleagues over the years who asked sharp questions and demanded clear succinct answers.

The second serious message in the subtitle: This is an informally written book, like what in the business they call a "nonfiction trade book." It is written more like a cleaned-up transcript of a conversation than it is scholarly writing. There are contractions

and jokes and popular culture references and personal experiences. As you can see in the chapter notes at the end, the material is lightly referenced, in part because some mentions are well-known, in part because the focus is on a few key representative figures rather than an exhaustive exploration of all academics who have ever mentioned a topic. As academic reviewers of articles I submit sometimes say, unknowingly complimenting me with a complaint, "this thing reads like a talk." Not a style for all readers, I know, but a style that I hope makes a long history of complicated thinking accessible, useful and interesting to readers curious about a different way to think about human social science.

So *The Lively Science: The Ethknoworks Conversations* it is. In the next two chapters, I'd like to start out by looking a little more closely at three of the 19th century founders of modern human social science. The first, John Stuart Mill, actually lays the groundwork for BSS, but in a way that aims at HSR as well. The second, Franz Brentano, hangs onto BSS but muddies things up with the minds of subjects as necessary parts of any adequate explanation of human social life. Then Wilhelm Dilthey breaks with BSS completely and argues, as does this book, that HSR is a different kind of science.

Any one of these three alone could fill a lifetime of scholarship. Books and articles about all three of them litter the academic landscape. And these three are not the only possible choices for an HSR type like me to look at for historical roots. I think if I were starting life over again I'd study them all for years. In my day in graduate school we heard their names only as footnotes.

After dealing with those foundational figures, a second part of the book will ask, given that the science has to be different, how can we think about evidence, logic and falsification in a way that makes more sense than the old-fashioned laboratory model? A

third part will then look at a major issue that BSS hides with its delusional notions of "objectivity." Human social science involves human funders, human researchers, human subjects and human audiences communicating with each other across the boundaries of their different worlds. How do we come to terms with these multiple worlds as evidence is gathered and logic applied? Finally, at the end of the book, the broader context of human social science will be explored with the classic BSS research of Milgram, as already promised, but also with a consideration of the many interests at play in the field of human social research.

I am bounded by a word limit and a time limit, in both a contractual and a biographical sense, and overwhelmed with information in a digital sense. What I deal with in the next chapter, and in the rest of the book, are *general* features of how a human learns about other humans in a scientific way. The concepts selected from the ancestors and worked and re-worked in the book are central ones, among those that keep surfacing with each generation. As Dilthey—discussed in Chapter Three—would say in his work on interpretation, it is a matter of fitting old ideas to current realities so that they make sense in contemporary times. Dilthey's hero, with the archetypal German-sounding name of Schleiermacher, did it for Europe with the Bible and Roman law starting in the 17th century. I'm going to try a version of HSR designed for the early 21st century. I want to deal, in general, with the question of why HSR has to be different from BSS, how it can in fact do that, and how it retains its claim to be a science.

As they say in Spanglish when it's time to get going, dále gas, which means "give it gas." My late colleague, Max Martinez, San Antonio pachuco turned professor of creative writing, used to say that all the time when he wanted academic debates to get to

the point.

Just for fun, right after I wrote those lines, thinking of Max, I looked on the Internet. There is a song called "Dále Gas," done by several groups. This one is from a version by the Dikers (http://www.lyricsrequests.com/Dikers-songs-text/Dale-gas-song-lyric.html). Here is how it starts:

> Olvidar todo lo que queda atrás, si estuvo bien o fue fatal, nunca me resulta fácil. Esperar siempre se me dió muy mal, mientras los fantasmas ríen a mi espalda.

In my bad idiomatic translation:

> Forgetting the past, whether it was good or awful, it's never easy for me. Just waiting and hoping all the time bums me out, while ghosts laugh behind my back.

Then comes the refrain, dále gas, dále gas … That's more or less the attitude behind this book.