

From: Peter Sahlberg & Hakon
Leivfsvud (eds.), Theory in
Action, BRILL, 2016.

CHAPTER 2

On the Heuristic Role of Concepts in Theorizing

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Introduction

Concepts are central to sociology, and in this chapter I will focus on their role in theorizing. My argument is that at the stage of theorizing, concepts are primarily useful by being *heuristic*, that is, they help us to discover and make sense of what we are studying. They are tools of discovery. Their role in the final theory is quite different, namely to express or sum up some insight about social life in a clear and precise manner so that they also can be used in future research.

As we engage in a research project, we slowly make our way to the end. During this phase we use old concepts and sometimes try to create new ones. Whether the concepts are old or new, their main role at this stage is the same: to be heuristic or to help us discover and better understand what we are studying and trying to explain it (e.g., Swedberg, 2014a, 2014b).

One reason for focusing on *the heuristic role of concepts* is that most of the discussion of concepts that goes on in modern social science is about finding suitable empirical indicators and related methodological concerns (e.g., Goertz, 2006). While this type of issues are central and clearly indispensable to social science inquiry, they also need to be complemented and balanced by a knowledge and an understanding of the role that concepts play in theory and, related to this, in making discoveries.

The Naming of Concepts

Concepts have a name; and when you construct a new concept the issue of providing a name comes up. Hence the general importance of *naming*, when you discuss the role of concepts in theory as well as in theorizing.

There exist different approaches to naming. You can, for example, use existing words or invent new ones. It is also possible to start out from the name of an existing concept and add to it, creating a new concept in the process.

Max Weber took the position that it is usually best to use existing words.

If we are not to coin completely new words each time or invent symbols, like chemists or like the philosopher Avenerius, we must give every

phenomenon to which no term has yet been accorded the nearest and most descriptive words from traditional language and just be careful to *define* them unambiguously.

WEBER, 2001: 63

As an example of this strategy, Weber mentions his own term inner-worldly asceticism. He also pointed out that most scientists dislike new terms (unless they are of their own making).

Sociologists sometimes use an existing concept and with its help, create a new one. Starting with the concept of role, you can get *role set* (Merton) and *role distance* (Goffman). Other examples of this way of proceeding would be *status contradiction* (Everett C. Hughes) and *greedy institution* (Lewis Coser). The advantage of naming a concept in this way, is that the concept gets firmly linked to other concepts and theories.

You can also invent new words for concepts, say, by using Latin or Greek, or just by giving a twist to some word that already exists in one's own language. Examples of this are such terms as *sociologie* (Comte), *colligation* (Whewell) and *quantomania* (Sorokin).

A variant of this approach is to take some obscure or forgotten term, and introduce it as a social science term. This is quite common, as indicated by such terms as *anomie* (Durkheim), *charisma* (Weber) and *habitus* (Bourdieu).

Charles S. Peirce, the American philosopher who was very interested in the process of theorizing, was a fierce advocate of using foreign names for new concepts. Philosophers should in his view not use everyday terms; and the reason for this is that philosophical terms must be "distinct and different from common speech" (Peirce, 1998b: 265). As examples from Peirce's own work, one can mention such terms as *abduction*, *retroduction* and *interpretant*.

In general, Peirce was fearful of the popularization of philosophical terms, something that in his mind would inevitably lead to a distortion of their meaning. One way to counter this, which he himself sometimes engaged in, was to create terms that are "so unattractive that loose thinkers are not tempted to use them" (Ketner, 1981: 343). As one example of this one can mention his term *pragmaticism*. Peirce did not like what William James and others had done to pragmatism; and this was one way of countering their ideas.

Peirce also believed that by choosing a new name you would be in a better position to control its meaning, than if you just chose an existing term. To some extent this is probably true, even if it also seems that all social science terms tend to lose some of their freshness and original meaning after a while.

It is also true that it is a mistake to introduce too many new terms. The reader of an article or a book will soon lose patience if too many new terms are

introduced. The point, I would argue, is to draw attention to what is truly novel, not to create a whole new terminology.

To what has just been said, it should be added that you can run through a number of potential new names in your mind, not just to find the right one, but also to discover something new about the phenomenon the concept refers to. This is another example of the heuristic use of concepts, here applied to naming. Each name has a series of meanings and associations; and these may be worth exploring.

To Define a Concept

So far I have used “term” and “concept” interchangeably, but they are by no means identical. A term, for one thing, is less precise than a concept; for another, it does not need to be consciously constructed. According to Peirce, when you turn a term into a concept you make it more rational. A concept, he suggests, is “the rational purport of a word or a conception” (Peirce, 1998a: 332).

Introducing such a rational element can take many forms, including that of creating a definition or just giving a more analytical and economic description of something. Since efforts in this direction may have unanticipated and heuristic consequences, they should be encouraged.

But while it is important to create a concept, there are several steps to the process. Rushing into the creation of a definition is, in other words, not the best way to proceed when you do research; and there are many reasons for this. For one thing, the notion that you are pretty much finished with a concept, once you have produced a good definition, is wrong (Goertz, 2006: 3–5). Many tasks remain to be done.

The notion that you can somehow produce a definitive definition is also erroneous. When you define a word, as Wittgenstein has pointed out, you basically shift the problem to other words. “What should we gain by a definition, as it can only lead us to other undefined terms?”, he asks (Wittgenstein, 1953: 26).

Most importantly, a rush to formulating a definition may be a rush to judgment. The reason for this is that a concept, like an explanation, can rarely be formulated at the beginning of the research process. It is often not possible to create a concept until the research is well under way.

It may be helpful with an example at this point. In *The Protestant ethic and the spirit of capitalism* Weber begins with a description, and not with the concept, of the spirit of capitalism. This is a deliberate move from his part; and he tells the reader that you cannot begin an investigation with “a conceptual definition” (Weber, 1930: 48). You should instead start with “a provisional

description", Weber says; and "such a description is...indispensable in order to clearly understand the object of the investigation". "The final and definitive concept cannot stand at the beginning of the investigation, but must come at the end" (Weber, 1930: 47).

More by Weber on the Use of Concepts

Before you decide on a concept, you can let your imagination run free, and in this way come up with creative ideas (e.g., Weber, 1949: 94). But once this has been done, you need to tighten up the analysis, and for this you need a concept.

The concept, Weber also says, is "one of the great tools of all scientific knowledge" (Weber, 1946: 151). It allows us to proceed to the next stage of the research; and it does so through its capacity "to establish *knowledge of what is essential*" (Weber, 1975: 213).

In one of his writings Weber provides us with a description of the discovery of the concept. This account explains how useful a concept can be, but also how it can mislead:

Plato's passionate enthusiasm in *The Republic* must, in the last analysis, be explained by the fact that for the first time the *concept*, one of the great tools of all scientific knowledge, had been consciously discovered. Socrates had discovered it in its bearing. He was not the only man in the world to discover it. In India one finds the beginnings of a logic that is quite similar to that of Aristotle's. But nowhere else do we find this realization of the significance of the concept.

WEBER, 1946: 141

In the section that follows this mini-history of the concept Weber describes how the idea emerged in early Greek philosophy that if you could only come up with the right concept for some phenomenon, the problem of its true meaning would be solved. This idea was to have a profound impact on Western thought; and the tendency to look for the one right concept, in which all the different manifestations of reality can be expressed and summarized, still haunts social science.

Weber continues his mini-history of the concept as follows:

In Greece, for the first time, appeared a handy means [viz. the concept] by which one could put the logical screws upon somebody so that he could not come out without admitting either that he knew nothing or that this

and nothing else was the truth, the *eternal* truth that never would vanish as the doings of the blind men [in Plato's cave] vanish. That was the tremendous experience which dawned upon the disciples of Socrates. *And from this it seemed to follow that if one only found the right concept of the beautiful, the good, or, for instance of bravery, of the soul – of whatever – that then one could also grasp its true meaning.*

WEBER, 1946: 141; *emphasis added*

Most of the rest of what Weber has to say about the way to use concepts in modern social science can be found in his discussion of *the ideal type*, a term he had picked up from a colleague and invested with his own content (e.g., Bruun, 2007). The ideal type, it should be noted, helps us to both construct concepts and to use them. And it does so in a very special way.

Much of what Weber says about the ideal type falls in the philosophy of science; and what he says is often hard to penetrate (Weber, 1978: 19–22, 2012: 124–137). In what follows I will bypass most of this material and instead focus on another task. This is to spell out how to construct and use ideal types in practical terms.

An ideal type, Weber says, is the creation of the social scientist. It is essentially a “mental construct” (*Gedankenbild*). All social science deals with meaning; and this is the case for the ideal type as well. In an ideal type you outline the action that a typical actor will take (or that make up a so-called order) and the meaning that answers to it. You also make the following important assumptions: that the actor has full knowledge, is fully aware of what he/she is doing, acts in a rational way, and commits no errors. You then confront this mental and ideal construct with the empirical reality you are studying and go from there.

An ideal type has a number of functions; and one of these is to provide terminological clarity and precision. Since reality is endlessly rich and contradictory, according to Weber, it is important that the ideal type is clear, simple and coherent. That an ideal type fulfills these criteria is helpful when you theorize, but especially important during the main study and when the results are presented.

The most important function of an ideal type, however, is something else; and it is precisely this quality that also makes it extra well suited for theorizing during the stage of the pre-study. It is to be *heuristic*.

The ideal type, Weber repeatedly says, is a “heuristic tool”; and this means that it should primarily be used to discover new aspects of a phenomenon (e.g., Weber, 2012: 116, 132). The ideal type “is a tool”, Weber also says, “*never an end [in itself]*” (Weber, 2012: 126).

The ideal type can be heuristic in a number of ways. One of these is to help the researcher to come up with hypotheses. An ideal type “is no ‘hypothesis’ but it offers guidance for the construction of hypotheses” (Weber, 1949: 90). The way in which it does this is essentially as a result of being confronted with reality. The actor lacks full knowledge – why? The actor does not behave in a rational way – why? And so on.

Another way in which an ideal type can be heuristic, and which I have found quite useful, is the following. One of the purposes of an ideal type, Weber says, is to “serve as a harbor before you have learned to navigate in the vast sea of empirical facts” (Weber, 1949: 104). This means among other things that when you begin to study a complex phenomenon, it is useful to have an ideal type at your disposal.

If you want to study Japanese feudalism, for example, you may begin the research by using an ideal type of Western feudalism or alternatively, if no such ideal type exists, create one. With its help, you will then be able to focus in on certain aspects of Japanese history, while ignoring others, and in this way get your bearing. If you discover significant differences between the concept of Western feudalism and Japanese reality, you have to account for these, and perhaps also create a new concept. If not, you can keep the original ideal type.

It should finally be pointed out that Weber is not the only sociologist who has tried to create a theory of how to construct and use concepts. There is also Herbert Blumer and his notion of *the sensitizing concept* (Blumer, 1954). This type of concept, Blumer says, helps the researcher by guiding him and her towards certain aspects of social reality. Similar to Weber, Blumer stresses that no “definitive concepts” exist. You can improve a sensitizing concept, but it will never be perfect or complete.

More on Constructing a Concept

Let us now leave Weber and Blumer and look at some other ways for how to create a concept. What I first want to discuss is the situation when a social science concept grows out of some existing word and its use in everyday language. In this case, the meaning of the concept will typically change and fluctuate.

An example may illustrate what has just been said; and for this I will use the word “mobbing” (Agevall, 2008). Mobbing roughly means bullying in everyday language; while a social science definition reads a bit different: “one or more individuals are subjected to negative actions, on several occasions and over an extended period of time, by one or more individuals” (Agevall, 2008: 34).

The word mobbing was first used in 1969 by a Swedish medical doctor who was upset over the harassment of his adopted son. In using the word mobbing, he referred to Konrad Lorenz' theory of the inborn aggression of animals, and how violence can be directed by a group of animals against one of its member.

The word immediately struck a chord with the Swedish public; and as it was used in the media its meaning was extended to a number of other phenomena. The term was, for example, given a legal meaning but also cast in the language of psychology. In an important book by psychologist Dan Olweus that appeared in 1973, the term mobbing was moved from the discourse of the group to that of the individual, and from the discourse of animal aggression to that of human behavior.

While Olweus mainly had schoolchildren in mind when he talked about mobbing, a decade later another Swedish psychologist extended its meaning once more. This time the actors were adults and the situation a workplace in which some people try to freeze out or otherwise harass and hurt an employee. Today the social science term mobbing also includes this type of behavior. Its current meaning, in other words, is a sort of sum of its history (cf. Somers, 1995).

But social science concepts can also come into being in other ways. One that is quite common is that a term that has been used for some time in social science is transformed into a full-fledged concept at a later stage. With Robert K. Merton we may call these terms *proto-concepts*. He has also described in an instructive way the way in which these differ from full-fledged concepts.

"Proto" means the earliest form of something; and "a proto-concept is an early, rudimentary, particularized and largely unexplicated idea" (Merton, 1984: 267). "A concept", in contrast, "is a general idea which, once having been tagged, substantially generalized, and explicated can effectively guide inquiry into seemingly diverse phenomena".

While proto-concepts, Merton says, "make for early discontinuities in scientific development", fully developed concepts "make for continuities by directing our attention to similarities among substantively quite unconnected phenomena" (Merton, 1984: 267).

As an example of how a proto-concept can be turned into a full-fledged concept, take the notion social mechanism. The term social mechanism can be found in the works of a number of early works by social scientists, but it was not much discussed by these, nor was it turned into a full-fledged theoretical concept. This did not take place until much later (e.g., Hedström and Swedberg, 1998).

Another example of a pseudo-concept that is in the process of becoming a full-fledged concept is that of theorizing. In sociology, the word theorizing made its first appearance around 1900, but as a search in JSTOR shows, it has

had to wait for more than a century to be treated as a full-fledged social science concept (Small, 1896: 306; Swedberg, 2012).

It is not clear through what kind of cognitive processes a concept is constructed; nor how you consciously go about constructing one. Provisionally, you can perhaps say that when you go from observing something to turning it into a concept, you can proceed in two ways: you abstract and you generalize.

When you abstract, you remove details or, to use a metaphor, you move upwards and create one or more new levels. When you generalize, in contrast, you mainly move sideways. You do this by incorporating different kinds of phenomena, and finding things in common with these.

A sign of someone being an imaginative social scientist, according to C. Wright Mills, is precisely "the capacity to shuttle between levels of abstraction" (Mills, 1959: 34). Everett C. Hughes meant something similar when he said that a social scientist should also be able to see "likeness within the shell of variety" (Hughes, 1984: 503).

To run up and down the ladder of abstraction, and also to be able to stretch a concept through generalization, is something that you can learn to do through training. It is also an activity that certain individuals excel in. Among philosophers, Kierkegaard is in my view unsurpassed when it comes to the ease with which he forms new concepts and handles their different levels (see e.g., Kierkegaard, 1985). Reading through such sparkling texts as *Repetition* or *The present age* is not only very instructive, but also very inspiring when you try to create a concept.

Political Scientists on Concepts (Sartori, Goertz)

It is also possible to err in various ways when you run up and down the ladder of abstraction, something that has been especially discussed by Giovanni Sartori and a number of political scientists inspired by his work (e.g., Sartori, 1970; Collier and Gerring, 2009). A fine discussion of such notions as conceptual stretching, conceptual travelling and the like can be found in the work of Gary Goertz (e.g., 2005).

According to Goertz, you can extend the scope of a concept by reducing the number of central features associated with it; and vice versa, you can limit its scope by adding features. A concrete example may make it easier to understand Goertz' argument. You can define the concept of peasants in a minimalist way, as say "rural cultivators" (# 1). You can then add that they live in "peasant villages" (# 2); that they show "high levels of rural social subordination" (#3); and that they "control/own land" (#4; Goertz, 2006: 73).

Goertz notes that different theories have used different combinations of these features in their analyses of peasants. Advocates of the moral economy approach, for example, tend to define peasants as rural cultivators (# 1), who live in peasant villages (# 2), and who show high levels of social insubordination (# 3). Marxists would want to add that peasants also control or own land (# 4).

One point that Goertz is very careful to make, is that depending on the concept, you will end up with different populations. Merton has expressed the same idea, but extended it to observation more generally: "concepts, then, constitute the definitions (or prescriptions) of what is to be observed" (Merton, 1945: 465). From a heuristic perspective, you want to play around with different definitions and see what happens when this is done.

There also exist different ways to proceed when you want to operationalize a concept; and Goertz suggests that you should always try to minimize the distance between the definition of a concept and how it is operationalized. What Goertz does not say (but is perhaps implicit in his approach), is that by playing around with a concept along the ways that he suggests, you can also discover some new aspects of a phenomenon.

In fact, in his very important work on the construction of concepts, *Social science concepts* (2006), Goertz pays next to no attention to the way in which you create a new concept or, more generally, to the way in which you deal with concepts in the context of discovery. This is somewhat disappointing since it is clearly Goertz' ambition to cover all the major aspects of the use of concepts.

This does not mean that Goertz' work is not important for the way in which concepts are to be dealt with, in the context of discovery. On the contrary, a good knowledge of his work is essential as well as helpful for what takes place during the stage of theorizing.

Through a small slight of hand, it is also possible to turn some of Goertz' valuable insights in a heuristic direction. Take, for example, his insistence that when you map out the meaning of a concept, you should also decide what its opposite is. If you study war or revolution, you need to figure out what non-war and non-revolution means. And when you try to figure out the opposite of something, you may well end up with some new and interesting ideas.

Using Existing Concepts

So far in this chapter I have mostly talked about creating new concepts, but it is more common when you theorize to use existing concepts or a mixture of new and old concepts. You can either use existing concepts, without changing

them, or you can tweak them a bit, like Weber often does. You can also use existing concepts as building material for new concepts, something that has already been mentioned and illustrated with the help of status contradiction among others.

The skillful use of existing concepts presupposes that the researcher knows quite a few concepts, so you have something to draw on and play around with. Some works in sociology are very rich in interesting concepts; and knowledge of these is therefore helpful.

One such work is Weber's *Economy and society*. This is especially true for its first chapter, which contains a presentation of what the author viewed as the basic concepts of sociology (Ch. 1, "Basic sociological concepts"; "*Soziologische Grundbegriffe*"). Weber carefully defines each of these concepts, and also tries to link them together, either in groups or by relating them to his central concept of social action.

That Weber builds all of his concepts in Chapter 1 in *Economy and society* on his notion of social action is worth emphasizing for the following reason. Sociologists are not so much interested in using and developing concepts as in using and developing *sociological* concepts. The difference is the following: while all concepts tend to focus on some aspect of reality and capture it, sociological concepts only do this for those aspects that are sociologically relevant (which means the relationship of some bit of reality to "society", "social interaction", "social action" or the like). Sociological concepts, in brief, direct and guide you to these particular aspects (e.g., Blumer, 1954).

While you may agree or disagree with the way in which Weber defines his basic concepts, his chapter is still very useful for anyone who wants to have a number of solid sociological concepts at his or her fingertips. You can also add to these concepts by reading the next three chapters in *Economy and society* (Ch. 2, "Sociological categories of economic life"; Ch. 3, "The types of legitimate domination"; and Ch. 4, "Status groups and classes").

Also Georg Simmel's sociological writings are full of useful concepts, but these are more intuitive and less formal than Weber's. Simmel rarely defines a concept, nor does he try to relate them to one another. This may lower their value in one sense, but it also makes it easier for the reader to take them over and make them into his or her own.

Simmel was well aware of this particular quality of his concepts and actually cultivated it. Just before his death, he wrote in his diary that his ideas function like cash that you inherit. You can use it to buy whatever you want... (Coser, 1971: 198–199).

Simmel's writings also illustrate the point that it is not only useful to be familiar with works that contain a number of carefully constructed concepts, such as Weber's *Economy and society*, but also social science literature that is

high on ideas. Of contemporary works in sociology that contain many interesting concepts, I especially have found the works of the following authors useful: Robert K. Merton, Erving Goffman and Everett C. Hughes. Merton's work contains many more concepts than most sociologists are aware of; and these have been as carefully crafted as those of Weber. The works of Hughes and Goffman are, in contrast, more like those of Simmel: very suggestive and easily made into your own.

Cognitive Science on Concepts

What makes it difficult to discuss the nature and use of social science concepts in a more satisfying way than has been done so far in this chapter, has much to do with the unclear status of the concept in modern science. What I am referring to is the important research that has been carried out by cognitive scientists, and according to which the so-called classical view of the concept is wrong (e.g., Murphy, 2002).

By the classical view of the concept is meant the theory, which originated in Antiquity and was famously advocated by Aristotle, that a concept covers a certain class of objects and has clear boundaries. Sometimes this is also called an essentialist definition of the concept; and it means that it is possible to enumerate the necessary and sufficient conditions for a concept (e.g., Goertz, 2006).

The problem with this approach is that people do not use concepts this way, according to cognitive scientists. Instead, they may use concepts as a kind of standard, which means that they see some phenomenon as embodying some concept, and others doing this much less (the so-called prototype view). A robin, for example, is seen as more of a bird than a penguin or an ostrich.

People's concepts are sometimes also centered around concrete examples, again in a way that goes counter to the classical view. If you grew up with a German shepherd, for example, this type of dog may be the archetypical dog for you (the so-called exemplar view). In all brevity, according to cognitive science, there exists quite a bit of ambiguity and lack of permanence in the way that people use concepts in their everyday lives.

Little effort has been made to spell out the consequences of this new and fuzzy view of concept formation in social science. It is however clear that you would end up with a new kind of social science concept if you followed the non-classical view (e.g., Goertz, 2006; cf. Ragin, 2000).

David Collier has suggested that under certain circumstances it can be useful to use non-classical concepts in social science or what he calls (inspired by Wittgenstein) family resemblance concepts (Collier and Mahon, 1993).

He defines these as concepts that just fulfill some necessary conditions but no sufficient conditions. Social scientists, for example, often define the welfare state as a state that fulfills some, but not all of certain conditions. A welfare state may be defined as a state that provides, say, two of the following three items: old age pensions, health insurance and unemployment compensation (Goertz, 2006: 59–60).

It is in my view clearly useful to know that it is possible to use two kinds of concepts: (1) those that fulfill both necessary *and* sufficient conditions (the classical view); and (2) those that just fulfill some necessary conditions but no sufficient conditions (the family resemblance view). It is not so clear, in contrast, that the latter type of concept captures what is new with the view of concepts that can be found in Wittgenstein and in cognitive science.

But it is, of course, also possible to make the argument that you should try to stay with the old view of social science concepts, even if it is true that people in their everyday lives use concepts in a different way. The reason for proceeding in this way would be that it is much more difficult to meet such criteria as clarity, economy and lack of ambiguity, when you use the view of concepts in cognitive science.

As an example of the old way of defining a concept you can take Weber's concept of "social action" in *Economy and society*. The term *action* is defined as behavior in which the actor has invested meaning; and the term *social* is defined as action oriented to the behavior of others (Weber, 1978: 4). Or to use another example, this time from Theda Skocpol's work: "social revolutions are rapid, basic transformations of a society's state and class structure; and they are accompanied and in part carried through by class-based revolts from below" (Skocpol, 1979: 4–5).

Regardless how this issue is decided, it is true that the new view of concepts in cognitive sciences does add ammunition against the old notion that you can somehow distill *the* true interpretation of a concept from the ways in which it is used. This is simply not possible, as Wittgenstein was the first to establish.

This view, according to Wittgenstein, is similar to the way in which we sometimes try to teach children the meaning of words (Wittgenstein, 1953). We point at an object, say an apple, and then pronounce the word "apple". To this view of seeing things, Wittgenstein counterposed his own theory of language games. The meaning of a word or a concept depends on the way that it is used or, more precisely, on the language game of which it is part.

Take, for example, the word democracy. When two ordinary persons discuss democracy it has one meaning; as part of a constitution, a second meaning; and as part of a social science analysis, a third. Or take love, which can mean the same as agape, friendship, and that you have zero points in a tennis game – all according to the context and how the word is used.

The current view in cognitive science of the unstable nature of a concept may also help to explain why it is so hard to fix the meaning of a social science concept and keep it intact. It is not only true that the world changes, and with it the meaning of words. Social scientists themselves also use concepts in the non-classical way when they talk, write and think.

The Clarification of Concepts

What is referred to as the clarification of concepts has attracted quite a bit of attention over the years in social science. Committees for this purpose have, for example, been created in political science, sociology and so on. But beyond publishing statements that contain definitions of concepts that the committees recommend should be used (and which have usually been ignored), little seems to have been accomplished this way.

This should not necessarily be seen as an argument against having this type of committees. But their task may need to be changed. What is especially needed is conceptual clarification of a more fundamental type, and attempts in a Wittgensteinian spirit to clear up the various misunderstandings that create problems for social scientists when they use concepts in their research and their writings (Wittgenstein, 1953).

As mentioned earlier, new social science concepts tend to lose their original meaning after a while, another complication to keep in mind. One way that this may come about is through the diffusion of successful social science concepts into common language, via newspapers, television and so on. As examples of this you can mention charisma and serendipity (e.g., Merton and Wolfe, 1995).

Another way in which new social science concepts may lose their original meaning is through the way in which they are used by other social scientists than the ones who originally invented them. Peirce was particularly concerned with this issue and created an "ethics of terminology" to deal with it (Peirce, 1998b; cf. Oebler, 1981).

Peirce argued that a scientist who uses a concept in any other way than its original meaning, "commit[s] a shameful offense against the inventor of the symbol and against science, and it becomes the duty of the others to treat the act with contempt and indignation" (Peirce, 1998b: 265). No-one, so far, has tried to implement Peirce's ideas.

The unstable nature of the concept will also affect the attempt to operationalize it. For a concept constructed according to the classical view, there will presumably be less room for different measures, than when a concept of the family resemblance type is involved. It is difficult to say much more than so on this particular issue.

But the topic of operationalization also raises some other issues that are important to mention. One of these has to do with the way in which measures of operationalization are related to a concept in the first place; and another with the different approaches to operationalization that can be found in quantitative and qualitative studies.

These two issues, as it turns out, are often related. Qualitative social scientists have a tendency to be quite interested in concepts and also in the issue of how these are related to data. Quantitative social scientists, in contrast, spend much less time with concepts; and what especially interest them are indicators and their relationship to variables.

An interesting discussion of these two issues can be found in a recent book by Gary Goertz and James Mahoney on the different cultures that have emerged around qualitative and quantitative studies in social science. In *A tale of two cultures* they write:

For qualitative scholars, the relationship between a concept and data is one of *semantics*, i.e. meaning. These scholars explore how data can be used to express the meaning of a concept. For quantitative scholars, by contrast, the relationship between variable and indicator concerns the *measurement* of the variable. These scholars focus on how to use indicators to best measure a latent construct.

GOERTZ and MAHONEY, 2012: 140

Finally, one aspect of operationalization that tends not to be mentioned in books on methodology is the heuristic one. To try to operationalize a concept also represents an opportunity to explore a phenomenon that should not be missed. You may not only discover some new aspect of a phenomenon, when you try to operationalize a concept, but also stumble over some new data set. This is especially the case at the early stage of the research.

Concluding Remarks

The main thrust of this chapter has been to argue that more attention needs to be paid to the heuristic role of concepts in sociology and social science. During certain stages of the inquiry, to summarize, concepts should be used for heuristic purposes so that they can help us discover new aspects of the phenomenon we are interested in. In the context of justification, in contrast, concepts should be treated in a different way. At this stage you want the concepts to be as stable and clear as possible, so that they can properly capture and express what you have found, and also relate this to the sociological tradition.

The inherently unstable nature of the concept often makes it hard to fashion concepts in such a way that they can play the role you want them to play in the final theory. At the stage of theorizing, in contrast, you can use the unstable nature of the concept to your advantage. It may well be true that for purposes of clarity, economy and logic, an attempt must be made to stabilize the final concept in various ways. When you try to explore a novel phenomenon or say something new, in contrast, to do so may well make it harder to reach your goal.

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