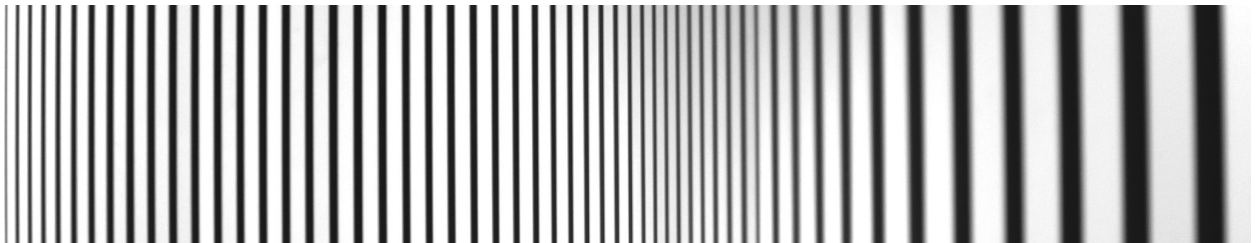# Methodological Approaches

16

Quantitative Analysis in Cultural Sociology: Why It Should Be Done, How It Can Be Done

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INTRODUCTION: SOCIOLOGY AND CULTURE – AN UNHAPPY MARRIAGE

Sociology took shape in the 19th century as an offshoot of Enlightenment thought, which critiqued religion, tradition, and belief as sources of ignorance and tutelage, conceiving of science, reason, and technology as their superior successors. These Enlightenment roots have had profound and lasting effects on sociology, not least by installing a blind spot for culture (Houtman, 2003). In the hands of sociologists, culture got the connotation of premodern backwardness or even stupidity: it came to be understood as a lack of rational insight into the true nature of things – as the misunderstandings that people needed to be liberated from to enable the light of reason to shine and to make social progress possible (Seidman, 1994: 19–53).

This blind spot for culture still exists today, as can be seen from the notion of 'modernization', which was introduced in the mid-20th century by American sociologists to refer to the social transformations already studied by their classical predecessors. Until the present day, 'modernization' refers hardly, and certainly not in the first place, to processes of cultural change. It is primarily understood as a process of economic and technological change that especially takes place in the realms of work and organization and that is ultimately driven by new scientific knowledge and technological inventions. In their textbook *Sociology: A Global Introduction*, to cite just one example, Macionis and Plummer (1997: 673) define 'modernity' as 'social patterns linked to industrialization' and 'modernization' as 'the process of social change initiated by industrialization'. This example could effortlessly be replaced by many others with the same effect: that industrial (or post-industrial) order is seen as constituting the major characteristic of modernity, from which its cultural features follow more or less logically and automatically.

We understand cultural sociology as a necessary correction to this intellectual marginalization of culture and expand in what follows on the methodological requirements of such a correction. After an elaboration of the sociological habit of relegating culture to the status of something less relevant than economic and technological factors, we argue that for cultural sociology to successfully reconstruct and rejuvenate the discipline as a whole it should not define itself as just another specialization (besides political sociology, sociology of religion, sociology of work and organization, sociology of crime and deviance, etc.) in an already overly fragmented discipline, but rather as a general and substantially non-specialized

sociology. Its principal ambition should be to demonstrate to non-cultural sociologists, and indeed to researchers in disciplines beyond sociology and the social sciences, that taking culture more seriously yields increases in explanatory potential.

As we see it, such an endeavor requires a deployment of the quantitative methods that are so strongly emphasized in mainstream sociology and other disciplines. Drawing on examples from our own work of the past ten years, we demonstrate how the classical sociologies of Max Weber and Emile Durkheim can be used to inform quantitative cultural-sociological studies that demonstrate culture's explanatory potential by means of survey research and experimental research respectively.

THE PROMISE OF CULTURAL SOCIOLOGY

Sociology's Positivist Legacy and its Blind Spot for Culture

It is telling that most introductory textbooks in sociology do not mention that Auguste Comte, founder of positivism and godfather of sociology, later in his life also founded a pseudo-scientific positivist 'Religion of Humanity', proclaiming himself its pontiff. For later sociologists, this was indeed quite embarrassing, not least because Comte was not just another sociologist – in the United States at the beginning of the 20th century he was even the most often cited sociologist after Herbert Spencer (Hart, 1927). This makes it understandable, as Hadden (1987: 590) and Seidman (1994: 31–2) point out, that later sociologists have often dismissed his shenanigans as an unfortunate accident that had in itself nothing to do with the nature of his positivist sociology. Alvin Gouldner (1970: 88–108), however, gives good reasons to assume that the two were intimately connected so that it is not merely a coincidence that Comte attempted to change sociology into a religion – Comte, who was so convinced that superior 'scientific knowledge' could, would and should replace 'religious belief'.

More important, but also often unacknowledged, is the circumstance that the sociologies of Karl Marx and Emile Durkheim, the discipline's two classical founders besides Max Weber, also share the scientistic pretention of being able to scientifically ground morality. Marx and Durkheim, too, consider it their assignment to evaluate people's beliefs and cultural understandings in the light of rational scientific insight into what social life in modern society 'really' or 'essentially' is,

and to reconstruct the former on the basis of the latter if it is found wanting. They both follow the same logic in doing so: they derive their evaluations of what is 'abnormal' and what is not, of what is 'good' and what is 'bad', from an alleged insight in the nature of a 'real' social reality situated 'beyond' or 'underneath' the mystifying and concealing realm of culture (Houtman, 2003: 3–9; 2008). As to the exact nature of that 'real' and 'more fundamental' reality, they both point at the industrial division of labor, even though they imagine the latter quite differently.

For Durkheim, the industrial division of labor under 'normal' circumstances constitutes a realm of shared interests and harmonious cooperation between labor and capital; for Marx, contrariwise, it is under 'normal' circumstances the realm of industrial conflict, struggle, and exploitation, due to irreconcilable class-based economic interests. Whereas for Marx class struggle and exploitation are hence 'normal' and harmonious, and peaceful cooperation between labor and capital 'abnormal', Durkheim remarkably enough asserts exactly the reverse. Both Marx and Durkheim thus pretend to be sitting on God's lap, so to say, enabling them to fathom social reality as it 'really' is, in a way inaccessible to ordinary mortals and thus enabling them to distinguish 'normal' from 'pathological' (Durkheim) and 'true' from 'false' (Marx) class consciousness. Because of this scientific and positivist pretension of being able to identify in an intellectually authoritative fashion the degree of rationality of the beliefs, understandings, and behaviors of the participants in social life, and to scientifically ground a morality that can and should replace the latter if they are found wanting, their sociologies have clear traits of secular religions, too. In both cases we are dealing with value judgments disguised as scientific knowledge – value judgments that underscore that the notion that science can and should replace culture and religion remains in no way confined to Auguste Comte (Seidman, 1994: 19–53).

The Cultural Turn in Sociology

In our understanding, overcoming such a positivist and patronizing understanding of social actors' cultural meanings constitutes the principal promise of cultural sociology. The cultural turn in sociology that has taken shape as a reaction to the crisis of sociology of the 1960s and 1970s aims to accomplish this by giving actors' cultural understandings their full due by placing them at the heart of empirical research. Friedland and Mohr (2004: 4) rightly point out that such a cultural turn augurs nothing less than 'a paradigm shift': 'What we are

experiencing … can be … understood … as a recognition of the empirical, theoretical, methodological, and ontological limits of existing intellectual frameworks'.

Such a cultural sociology places the cultural meanings and understandings of those who are studied central stage, while the role of allegedly 'more true' interpretations and evaluations on the part of the researcher is significantly reduced. In the words of Sherwood et al. (1993: 375): 'The question … should not be how to demystify culture by showing that it 'really' represents something else, but rather how culture allows contemporary actors continually to remystify their social worlds'. Cultural sociology's principal distinguishing feature is hence its recognition that social life cannot have any 'deeper' meanings than those of the participants in social life themselves. Cultural sociology hence refuses to understand culture as merely a '"soft", not really independent variable' and to assume that 'explanatory power lies in the study of the "hard" variables of social structure, such that structured sets of meanings become superstructures and ideologies driven by these more 'real' and tangible social forces' (Alexander and Smith, 2003: 13). It understands culture no longer as something that needs to be understood in terms of something non-cultural, for example as 'the wagging tail of social power, as resistance to hegemony, disguised governmentality, organizational isomorphism, cultural capital, or symbolic politics' (Alexander, 2010: 283).

This type of cultural sociology has become a thriving endeavor since the 1980s, with increasing numbers of university chairs dedicated to it, increasing numbers of researchers joining the bandwagon, and increasingly thriving sections in sociological associations like the American, European and International ones. Yet, as we see it, there are also reasons for concern. Firstly, a disproportionate chunk of cultural-sociological research effort remains confined to the fairly limited and narrowly defined domain of art, popular culture, and media. There is nothing wrong with these research topics in themselves, of course, but more thematic variation is urgently called for, with special attention to research themes that are central to mainstream sociology, like social stratification and politics, to enable cultural sociology to redeem its promise of improving sociology by 'culturalizing' it. A second reason for concern, in actual research practice quite closely related to the former, is cultural sociology's self-imposed restriction to a narrowly defined set of research methods that are conventionally identified with the study of culture, for example ethnography, in-depth interviewing, qualitative content analysis, and discourse analysis. Although we are obviously not 'against' qualitative methodologies

like these, and have indeed often relied on them in our own cultural-sociological studies (e.g., Aupers et al., 2012; Harambam et al., 2011; O'Neill et al., 2014), they appear to invite overly descriptive empirical studies that fail to make a clear theoretical contribution and fail to deliver much in terms of sociological explanation. Along related lines, the massive influence in cultural sociology of Clifford Geertz's (1973: 3–30) plea for 'thick description' has been critiqued as stimulating a 'move away from general explanatory theory and towards the fleeting, local and contextual' (Smith, 2008: 171).

This is why we want to stand up for a solid explanatory cultural sociology that addresses the broader social consequences of social actors' cultural meanings and understandings. If sociology's major shortcoming has traditionally been its dismissal of culture as a mere 'side issue' and a necessarily 'dependent' variable, then one has to wonder whether descriptive ethnographic research offers much of a solution. In our opinion, this is not the case, which calls for research that aims to go beyond description, reverses the customary causal order, and explicitly assigns culture an explanatory role as an 'independent' variable. Moreover, if such an intellectual endeavor is to be more than just another sociological sub-field or specialization, two other things are vital as well. Firstly, to convince not only non-cultural sociologists of culture's explanatory potential, but, if possible, researchers in disciplines like cognitive psychology and medicine as well, taking seriously the use of ('hard') methodologies in these circles is essential (Perrin, 2004; Steensland, 2009). Secondly, it is also vital to remain in constant critical dialogue with the theoretical tradition of sociology rather than to completely discard the latter and exchange it for more or less fashionable theoretical ideas from the humanities (postmodernism, poststructuralism, semiotics, etc.). In our opinion, such an exchange is not even necessary, because the classical cultural sociologies of Max Weber and Emile Durkheim, largely coinciding with their sociologies of religion (Durkheim, 1965 [1912]; Weber, 1963 [1922]), offer some simple and powerful insights that can, without major difficulties, be adopted to inform quantitative cultural-sociological studies that powerfully demonstrate culture's causal consequences. More specifically, we argue that Weber's cultural sociology can be used to inform survey research that gives social actors' motives their causal due, whereas Durkheim's treatment of culture as a social fact that guides feeling, thinking, and knowing can inform experimental research that demonstrates culture's causal efficacy. In both cases we provide illustrations from our own work of the past ten years.

SURVEY RESEARCH AND THE WEBERIAN LEGACY: CULTURAL MOTIVES FOR SOCIAL ACTION

Cultural Sociology's Skepticism about Survey Research: A Weberian Reconstruction

Cultural sociologists tend to be skeptical about survey methodology for two principal reasons. The first is the major influence exerted by the researcher's theoretical preconceptions on the findings that may or may not be attained. The second is the tendency to conceive of people's cultural understandings – measured as 'values', 'attitudes', or 'opinions' – as 'determined by' their 'social status' or 'social position', conceived as an 'objective' variable that determines the aforementioned 'subjective' variables.

The first objection to survey research is in itself valid. It is after all the researcher who decides on the questions to be included in the questionnaire, the response categories to be used for each of these questions, and the variables that are taken to be the 'dependent' and 'independent' ones. This objection assumes, however, that sociological research should always and necessarily be aimed at the intellectual representation of the culturally informed lifeworlds of those who are studied. This aim is, however, not self-evident and can, as indicated above, even be critiqued for producing massively descriptive studies without much theoretical relevance. To the extent that the testing of sociological theories is accepted as a legitimate and worthwhile enterprise, the influence of the researcher's theoretical preconceptions ceases to be a problem. More than that: it becomes the major strength of survey methodology, because it enables researchers to systematically focus on the variables that matter from the perspective of the theory they want to test. Even though such a theory hence defines most of social reality as theoretically irrelevant, this does not mean that the theory is necessarily invalid. All testable theories are after all one-sided reductions of the full complexity of social reality, but the vital question for empirical research is which of them are empirically tenable and which are not.

Cultural sociologists' second reason for skepticism is the tendency in survey research to either leave out people's cultural understandings as 'distortions of real social reality' or to reduce them to the status of 'dependent variables' that as 'values', 'attitudes', or 'opinions' need to be explained from allegedly 'more fundamental' or 'more real' 'objective' variables like 'social class'. Although this does indeed often occur, it is not inherent to survey research. More than that: survey research that purposefully includes cultural variables and liberates them from their status as necessarily 'dependent' ones, constitutes the most promising way of critiquing such tendencies, if only because it uses a methodological language that is understood and accepted as legitimate by those who are the targets of such critiques. Including cultural variables in survey research thus enables cultural sociologists to go beyond descriptive ethnographic analyses by systematically critiquing theories that fail to take culture seriously enough.

Max Weber's classical sociology provides useful guidelines for enriching survey research by taking culture more seriously. This is because his sociology is based on the notion that sociological analysis should address actors' cultural understandings and motives on the one hand, and the broader social consequences of the actions informed by the latter on the other. According to Weber's historical and comparative sociology, after all, all world religions define paths to salvation, and hence define religious interests and motives that encourage particular types of action, while discouraging others. Religiously informed actions by devout believers subsequently have all sorts of broader social consequences, frequently unintended ones, of which Weber singled out the rationalization of the West for special attention. The *Protestant Ethic and the Spirit of Capitalism* (1978 [1904–1905]) addresses just one single causal link in this much more complex and wide-ranging process. Even though virtually all contemporary sociologists underscore the latter's exemplary status, Colin Campbell (2006) points out just how remarkable it is that at a closer and more critical look hardly any of them follow Weber's acclaimed approach in his or her own research (see also Campbell, 1996).

It is clear that survey methodology cannot do justice to the full complexity, richness and subtlety of Max Weber's historical and comparative sociology. Yet, even the mere inclusion of motives for action, so often left out as irrelevant in survey research, can already make a tremendous difference. It enables survey researchers to replace more or less problematic theoretical assumptions about why people do what they do by a systematic analysis of the actual role of motives in driving social action. We provide an example of our own research into the alleged decline in class voting since World War II. It demonstrates how including motives can be used to test and critique sociological theories that downplay the role of culture. In this case this leads to the remarkable conclusion that the often proclaimed decline in class voting has not even occurred. Instead, the West has witnessed a massive increase in non-economic

cultural voting, systematically misinterpreted as a decline in class voting due to the neglect of voting motives.

Illustration: The Alleged Decline in Class Voting

Ever since Marx's classical sociology, the relationship between class and politics has been one of sociology's major research interests. After World War II this sparked a research tradition based on the analysis of survey data and aimed at mapping and explaining differences in the degree to which class drives voting behavior across time and between countries. After Robert Alford's pioneering work in the 1960s, the strength of this relation came to be known as the level of 'class voting' and came to be measured by means of a simple index that was subsequently named after him. It is calculated 'by subtracting the percentage of persons in non-manual occupations voting for "Left" parties from the percentage of manual workers voting for such parties' (Alford, 1967: 80). So, the more frequently workers vote for leftist parties and the less frequently non-workers do so, the higher the Alford index, and the higher the level of class voting.

When a quarter of a century later Clark and Lipset affirmatively answered the question posed in the title of their article 'Are Social Classes Dying?' (1991), their claim was critiqued on mostly methodological grounds. This resulted in the so-called 'Death of Class Debate' that raged for more than ten years. Critics maintained that even though calculating the Alford index is in itself simple enough, the study of between-country and over-time variations entails methodological complications that demand more sophisticated statistical procedures (e.g., Hout et al., 1993). Even though this emphasis on statistics is in itself not surprising, because it constitutes one of the defining features of mainstream quantitative sociology, in this case – and doubtlessly in many others, too – it obscured major theoretical shortcomings in most of the empirical studies that the debate evoked, especially the neglect of voting motives.

This neglect of voting motives is in a way surprising, because researchers in this field have of course always had clear ideas about this. Under the heading 'Why Expect Class Voting?', for instance, Alford wrote in the 1960s:

> A relation between class position and voting behavior is a natural and expected association in the Western democracies for a number of reasons: the existence of class interests, the representation

of these interests by political parties, and the regular association of certain parties with certain interests. Given the character of the stratification order and the way political parties act as representatives of different class interests, it would be remarkable if such a relation were not found. (1967: 68–69)

Because different classes have different economic interests that are promoted by different parties, people are hence held to vote for the party that best promotes their own economic interests. In the words of Lipset et al. (1954: 1136), 'The lower-income groups will support [the leftist parties] in order to become better off, whereas the higher-income groups will oppose them in order to maintain their economic advantages'. What was assumed, in short, was that the working class voted for leftist parties because it was in favor of economic redistribution, whereas the middle class opposed these parties, because it rejected this political aim.

Research findings by Paul Nieuwbeerta (1995), reprinted in two edited books with the most relevant research findings the debate has sparked – *The End of Class Politics?* (Evans, 1999) and *The Breakdown of Class Politics* (Clark and Lipset, 2001) – have done much to demonstrate that the methodological critiques by Hout et al. (1993) were futile. The use of more advanced statistics and data from more years and more countries, Nieuwbeerta demonstrated, produced basically the same conclusions in terms of differences between countries and the decline in class voting. Much more importantly, but unfortunately also much less acknowledged, is that Nieuwbeerta's attempt to explain these differences and this decline from socio-economic context variables derived from a class-theoretical framework failed miserably: virtually all hypotheses were refuted (Nieuwbeerta, 1995: 57–77).

Our own studies of the alleged decline in class voting have meanwhile demonstrated why Nieuwbeerta's results were so disappointing. The principal cause is that the obsession with statistics in the 'Death of Class Debate' has obscured significant theoretical weaknesses and shortcomings, especially caused by the complete neglect of voting motives. Including these motives in our own research quickly revealed that the newly grown consensus of a decline in class voting in Western countries had in fact been built on quicksand (Achterberg, 2006; Houtman, 2001; 2003; Van der Waal et al., 2007).

Figure 16.1 demonstrates why this is so. It features a conceptualization of voting that gives two voting motives their due. It firstly inserts the voting motive that has always been assumed, i.e., 'economic conservatism'. The type of 'class
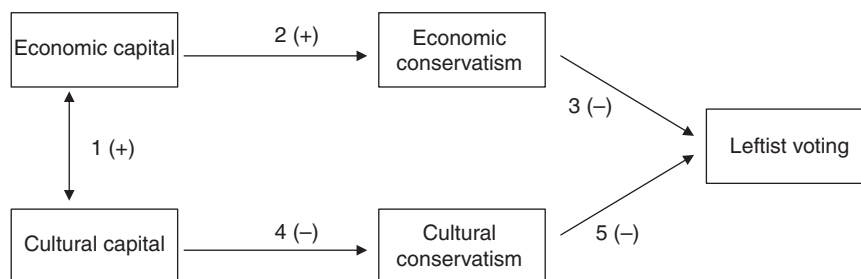
Figure 16.1 Distinguishing class voting (path 2 × path 3) from cultural voting (path 4 × path 5)

voting' that the Alford index and its statistically more advanced offspring aim to capture is hence represented by the upper part of Figure 16.1. It can be defined as voting for a leftist or rightist political party on the grounds of economically progressive or conservative political values that are generated by, respectively, a weak or a strong class position. Figure 16.1 also introduces a second voting motive, referred to as 'cultural conservatism'. Among the general public it is basically unrelated to economic conservatism and unlike the latter it is also unrelated to class in an economic sense, i.e., to 'economic capital' in Bourdieu's (1984) sense. Yet, it is closely related to what Bourdieu calls 'cultural capital', measured in our research as high levels of education and participation in highbrow culture, either combined or as two separate variables (Houtman, 2001; 2003). The lower part of Figure 16.1 hence represents what we call 'cultural voting', i.e., voting for a leftist or rightist political party on the grounds of culturally progressive or conservative political values, respectively, grounded not so much in economic capital, but in cultural capital.

Employing this simple model of voting, our research has demonstrated that what has happened in Western countries since World War II is not so much a decline in class voting, but rather a massive increase in cultural voting. Whereas class voting has remained more or less stable during this period, cultural elites (and decidedly not economic ones) have become increasingly likely to vote for leftist or progressive parties for reasons of cultural progressiveness (tolerance, multiculturalism, cosmopolitanism, postmaterialism or however one prefers to call it), whereas those without cultural capital (and decidedly not the poor) have become more and more likely to vote for rightist ones on the basis of culturally conservative motives (authoritarianism, ethnocentrism, nationalism, or however one prefers to call it). Due to the widespread and routine use of the Alford index, which neglects the role of voting

motives, political sociologists have mistaken a massive increase in cultural voting for a decline in class voting (Houtman and Achterberg, 2010; Van der Waal et al, 2007). Small wonder, then, that Nieuwbeerta's attempt to explain differences in 'class voting' failed: what he recorded were not even differences in class voting in the first place.

EXPERIMENTAL RESEARCH AND THE DURKHEIMIAN LEGACY: CULTURE AS A SOCIAL FACT

Cultural Sociology's Skepticism about Experimental Research: A Durkheimian Reconstruction

Consistent with his positivist leanings in *The Division of Labor in Society* (1964 [1893]), *Suicide* (1951 [1897]), and *The Rules of Sociological Method* (1964 [1895]), the early Durkheim has strongly influenced mainstream positivist sociology. The cultural sociology of the late Durkheim of *The Elementary Forms of Religious Life* (1965 [1912]) and (with Mauss) *Primitive Classification* (1963 [1903]), on the other hand, has had much less of an influence on mainstream sociology (apart from the sociology of religion, that is) and much more so on anthropology (Fenton and Hamnett, 1984). *The Elementary Forms of Religious Life* (1965 [1912]) and *Primitive Classification* (Durkheim and Mauss, 1963 [1903]) both trace the fundamental cultural categories that structure a group's thinking and cognition to its social organization. This notion has further been elaborated in Mary Douglas' work (e.g. 1966), which because of that has become a major reference point for cultural sociologists in and of itself.

Douglas' Durkheimian theory of risk, mostly referred to as 'cultural theory', outlines how risk perceptions pertaining to technology and the environment are informed by cultural worldviews that stem from the strictness of definitions of group membership ('group') and the strictness of role definitions ('grid') (Douglas, 1992; Douglas and Wildavsky, 1982). The theory can be critiqued for exaggerating the institutional and social-organizational embeddedness of cultural worldviews (e.g. Kahan, 2012), much like John Fiske (1987) and Stuart Hall (1980 [1973]) in cultural studies can be critiqued for making too strong a priori assumptions about the rootedness of interpretive cultural frames in the structure of capitalist society and the inequalities it engenders. The effect is the same in both cases, i.e., 'pushing 'cultural studies' from the domain of meaning into that of social structure', as Sherwood et al. (1993: 372) observe in the case of cultural studies. Be that as it may, cultural worldviews not only provide social actors with motives for conscious value-rational action, as posited by Weber, but also operate as 'social facts' in a pre-reflexive fashion, 'behind the backs' of those concerned. This Durkheimian notion provides a second powerful classical sociological point of departure for quantitative cultural-sociological research.

Culture plays a role in matters of health and illness, for example, as exemplified by a study that demonstrates that Chinese-Americans, but not whites, tend to die earlier than expected if they feature a combination of disease and birth year that is considered ill-fated in Chinese astrology and medicine. The difference is statistically significant, exists across nearly all major causes of death, amounts to no less than a couple of years, and is larger if those concerned are more firmly embedded in Chinese culture and traditions (Phillips et al., 1993). This is a good example of a powerful consequence of culture that cannot be demonstrated by means of ethnography. The latter is hence not one of the strongest, but one of the weakest methodologies for redeeming cultural sociology's promise of liberating culture from its subordinate position as a side issue and a 'dependent variable'. By far the strongest methodology for doing so is ironically the experiment, a methodology that cultural sociologists tend to be even more skeptical about than survey methodology.

Without doubt, cultural sociology's cold feet about experimental research stem to a large extent from the latter's routine use for wiping out culture as sources of 'distortion' that allegedly prevent researchers from obtaining an 'objective' image of the 'real' and 'undistorted' effect of an independent variable (referred to as an 'experimental condition' or 'treatment variable' in these circles)

on a dependent one (referred to as an 'outcome variable' in these circles). Such a positivist treatment of culture as a 'source of distortion' rather than the symbolic universe with which humankind distinguishes itself from other living creatures is obviously hard to swallow for students of culture. Yet, the felt methodological necessity of wiping out culture's distorting influences does of course underscore precisely culture's consequences, conceived in a Durkheimian fashion. 'Placebo effects' in healing processes and in 'double-blind' medical trials, for instance, are effects of culture. More specifically, they are the effects of the trust that patients put in particular types of medical drugs, treatments, or doctors. They are, in Harrington's words (1997: 1), 'the ghosts that haunt our house of biomedical objectivity, the creatures that rise up from the dark and expose the paradoxes and fissures in our own self-created definitions of the real and active factors in treatment'.

The felt necessity of experimentally wiping out culture's allegedly distorting influences even implies that 'culturally enriched' experiments constitute a powerful cultural-sociological tool for demonstrating culture's causal efficacy, even in matters of health and life and death. All that is needed for this is a cultural enrichment of experiments by exposing not one single randomly selected group of test persons to the experimental and control conditions, but two groups that differ from one another in a cultural sense deemed relevant for the experiment at hand. Such experiments enable cultural sociologists to study in a systematic fashion whether different culturally defined groups react differently to, for instance, violent computer games, pornographic movies, leftist or rightist political messages, or 'alternative' medical treatments informed by holistic worldviews, due to culturally mediated differences in interpretation and understanding.

An example would be a research design with two culturally contrasting groups of patients with a particular disease, with one adhering to a holistic worldview and featuring low trust in conventional and high trust in alternative medicine, and another adhering strongly to the rationalist worldview that underlies biomedicine and featuring high trust in conventional and low trust in alternative medicine. One can then give one random half of both groups a conventional medical drug or treatment and the two other halves its 'alternative' counterpart. The resulting research design now no longer addresses the question *whether or not* the two treatments differ in effectiveness, but rather *for which of the two groups either of the two treatments works better or worse*. The subsequent statistical analysis of the resulting data hence no longer focuses on the direct effect of the contrast between the experimental

and the control condition, but rather on how this contrast interacts with the patients' worldview in affecting healing processes. As we see it, such culturally enriched experiments are methodologically more powerful for demonstrating culture's causal consequences than either ethnographic research or any other available methodological alternative. We provide an illustration from our own recent research that addresses culture's consequences for cognition.

Illustration: Culturally Mediated Cognition

One of the mainstays in public opinion research is that that people first need to have some elementary understanding of complicated matters before they can actually learn to appreciate them. This idea applies not only to opinions about issues such as the European Union (Anderson, 1998) or the judicial system (Van Gelder et al., 2015), but also to opinions about emerging technologies (Allum et al., 2008: 17). Following this 'to know it, is to love it' maxim, scholars working on this so-called 'knowledge deficit' question, institutional experts, and policymakers have often claimed that the public needs to be given more information to foster its appreciation and support. Such an alleged undifferentiated and unmediated effect of information provision contrasts sharply with our foregoing argument, which assigns more importance to culturally defined worldviews.

For this reason we recently did a survey experiment on informational provision about hydrogen technology. We deliberately chose hydrogen technology for two reasons. The first, of course, is to inform debates about the 'public uptake of science' (Wynne, 1992: 300). The second is that research has shown, time and again, that the public at large is poorly informed about this complex new type of energy technology (Ricci et al., 2008).

The idea that the uptake of information about such complex technologies as hydrogen technology is culturally mediated closely relates to arguments made in the so-called 'framing' literature (Chong and Druckman, 2007; Scheufele, 1999). The basic argument is that frames – 'principles of selection, emphasis and presentation composed of little tacit theories about what exists, what happens, and what matters' (Gitlin, 1980: 6) – vary across people of different backgrounds. This underlies our expectation that groups of people interpret knowledge made available to them on the basis of their cultural worldviews. More specifically, information is most likely to be accepted and translated into support if it suits one's cultural worldview.

Previous experimental research has shown that technological skepticism does indeed affect (or, technically speaking: 'moderates') the effect of informational provision about hydrogen technology considerably (Achterberg, 2014). Here, following a wider research tradition that addresses the links between religious worldviews on the one hand and public support for science and technology on the other (cf. Nisbet and Mooney, 2007), we study whether three religious worldviews affect the acceptance or rejection of information about hydrogen technology. First, White (1967) has suggested that because of their ideas about *dominion* of nature, Christians are less concerned with the environment (which is confirmed in research by Van Bohemen et al., 2012). Second, Christians are also more inclined to think in terms of *stewardship* – the idea that nature and the environment is to be taken care of (which is also confirmed by Van Bohemen et al., 2012). While a dominion worldview would actually give little or no reason to translate information about sustainable types of energy such as hydrogen into support, the second worldview pertaining to stewardship will do just that. Third, we include a non-Christian worldview pertaining to holistic spirituality. People with this worldview support the idea that mankind and nature are, and should be, strongly related, and that nature is a source of spiritual wisdom (Campbell, 2007; Houtman and Mascini, 2002). As both qualitative (Aupers, 2002) and quantitative (Achterberg et al., 2010) research has shown that people with such an holistic spiritual worldview are not at all dismissive of the use of technology, we expect people embracing such a worldview to be inclined to translate positive information about hydrogen technology into support for this type of technology.

Using a representative sample of the Dutch population (2008, N = 1012), we asked the respondents in our survey several Likert-type items tapping the three worldviews (for details on these measures see Achterberg et al., 2010). Then, drawing from a larger pool of 21 questions, we asked each of the respondents to answer a random selection of seven knowledge questions about hydrogen technology. Some of these questions tapped negative facts (facts that would lead to less support for hydrogen, for instance by focusing on the environmental costs of fabricating hydrogen fuel cells) and some of these questions tapped positive aspects (for instance by focusing on the reduction of polluting emissions from hydrogen-fueled vehicles). Then, respondents were given the correct answers to these seven knowledge questions, so that depending on the questions that were

randomly assigned respondents differed in the extent to which they were exposed to either positive or negative information. Finally, we asked the respondents five Likert-type items that measured support for hydrogen technology (see Achterberg et al., 2010).

Our results showed that positive information in fact does lead to more support for hydrogen technology. But this does not mean that this effect is identical for everyone. Two of our three suggested worldviews actually conditioned the effects of informational provision. We found that for people who uphold a dominion worldview, informational provision does not lead to higher or lower support for hydrogen technology. Only for those who do not embrace this worldview does the provision of positive information actually lead to an adjustment in their support for hydrogen technology – a clear demonstration of the conditioning influence of this type of worldview. For the stewardship worldview, the results are similar and depicted in Figure 16.2.

Figure 16.2 shows that people with dissimilar worldviews – those who embrace stewardship and those who do not – react totally differently to information about hydrogen technology. For those who underscore the idea of stewardship, positive information leads to more support for hydrogen technology. For those who do not embrace stewardship, the same type of information leads to *less* support for hydrogen technology. In short, the effect of informational provision varies considerably with the religious frames or worldviews that one adheres to. This survey experiment, hence, clearly demonstrates that cognition is in fact culturally mediated.

CONCLUSION

As a reaction to the so-called 'crisis of sociology' in the 1960s and 1970s cultural sociology has in the past few decades increasingly got the wind in its sails. It embodies a new intellectual modesty by breaking with the positivist pretension of being able to reveal what social and cultural phenomena 'really' mean. As such, it refuses to marginalize, play down, or retouch out culture as 'really' or 'actually' a reflection of an allegedly 'deeper' or 'more fundamental' and essentially non-cultural social reality. This means that cultural sociology is not a thematically and substantially specialized sociology, aimed at the study of the social aspects of art, popular culture, and media, but rather a general sociology aimed at the study of social reality's cultural layers of meaning and the latter's broader social consequences. Its appeal is hence not so much a matter of taste, but rather of intellectual urgency. Hugely influential rational action theory, for instance, tends to make far-reaching assumptions about instrumental-rational motives allegedly driving peoples' actions. Yet, the resulting empirical studies typically refrain from studying whether this is actually the case. As such, these studies remain more speculative than they could and should be, and they are doubtlessly often beside the mark as far as the actual motives for action are concerned. Cultural-sociological survey research, in short, offers a promising way of revealing shortcomings and misinterpretations in mainstream sociological research.

Cultural sociology's intellectual urgency, moreover, transcends the boundaries of sociology and
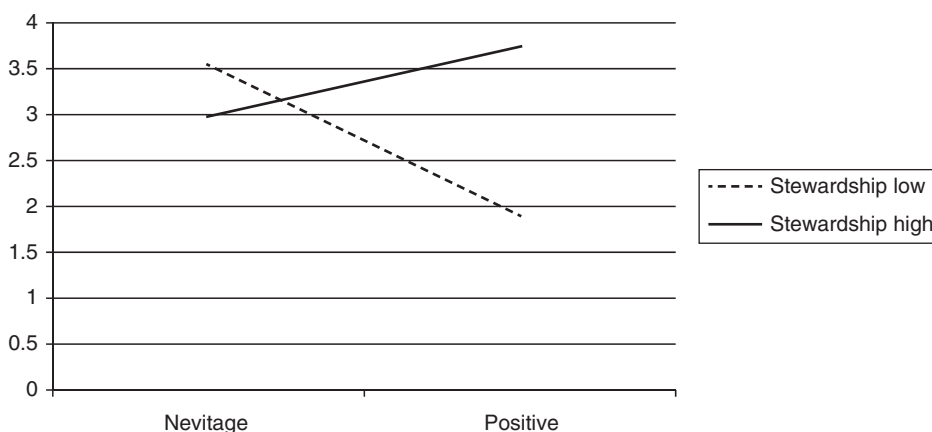
Figure 16.2. Type of informational provision (x-axis) and predicted support for hydrogen technology (y-axis) for respondents with minimum and maximum levels of stewardship

extends to other disciplines that have traditionally treated the cultural factor shabbily. In these cases especially, cultural-experimental studies informed by a Durkheimian cultural sociology are called for. An example is the type of psychology that naively assumes that all over the world individuals are in principle identical and hence interchangeable. According to this perspective, it does not really matter whether experimental studies rely on Chinese or European test persons, or whether the latter are well-educated (psychology) students or poorly educated factory workers. A sensational and well-cited article by Henrich et al. (2010), however, demonstrates that all this does make a big difference. In many research areas, ranging from visual perception and spatial reasoning to categorization and inferential induction, psychologists in non-Western parts of the world arrive at very different findings than their Western colleagues. It seems reasonable to assume that this can to a large degree be attributed to cultural differences that cause identical experimental stimuli to evoke very different reactions and consequences. This provides plenty of opportunity and perspective for the type of experimental cultural-sociological research that we have discussed.

Something similar applies to research into the effectiveness of medical treatments. It is quite likely that bio-medical studies that refuse to give cultural differences between patients their due will become increasingly contested in Western multicultural societies that want to recognize these same differences. This may open the gate to medical-cultural-sociological research that no longer aims to study *whether* a particular therapy is effective, but rather *for which culturally defined groups* it works better, worse, or perhaps not at all. Similarly, the circumstance that most of today's alternative medical treatments fail to withstand the test of the double-blind medical trial does not necessarily mean that they do not work for those who believe in them. Conversely, it is also hard to believe that many of the conventional medical treatments are equally effective for those with low trust in Western bio-medicine as for those with high trust in the latter. To the extent that cultural-sociological hypotheses of this type are confirmed in cultural-experimental medical research, we are dealing with powerful causal consequences of culture. Or better: we already know that such effects do exist, because as 'placebo effects' they are responsible for the circumstance that the double-blind medical trial has attained the status of the gold standard in medical research. The only challenge now is to better understand such effects of culture and, if desired, to apply them therapeutically, both of which appear virtually impossible without an input from cultural sociology.

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