

Similarities and differences between sociology 90 years ago and sociology 90 years from now

Wout Ultee
Radboud University

Before setting off, I wish to pay tribute to the person who held the first chair for sociology in Finland. Inevitably that person did not study sociology, Uno Harva came from theology, collected myths of steppe and forest societies in Northern Eurasia, found that their stories about the origin of the world refer to, among others, trees of life and water spirits, and admitted that their tales about the end of times are understudied. These societies and such ideas no longer charm sociologists. Still, Harva's findings are pertinent to a venerable question: what is the content of the origin and destination stories told in various human societies, and how did these ideas come about? They were not derived from observations, since neither the story tellers themselves were present at the events they recount, nor the persons who told them the hearsay. Now, one hypothesis says that people do not always derive ideas from observations, but reason by analogy, with the far away and unknown being modeled on the familiar and vitally important. In addition, the world originated long ago, and lakes, rivers and trees feature in the survival strategy of fishers and hunters in forests of Northern Eurasia, but not in that of peoples there who herd cattle on dry and treeless grasslands. So, trees of life and water spirits will be less dominant in folk lore of steppe societies. I quite like my own theoretical exercise regarding Harva's societies and their myths. However, I will not follow it up here by identifying analogies behind ideas on coming catastrophes in contemporary high-tech societies. There are quite a few possible disasters: the bursting of bubbles blown from a tower in Frankfurt, floods resulting from fossil fuel overdoses, mass killings in the name of God, and military clashes after diplomatic brinkmanship by Putin and Trump. I deal with the prospects, if any, of sociology in general.

Contemporary sociology is in a sorry state. This is valid for Finland, where people in Turku decided to celebrate the launch of sociology in Finland in 1926, by a talk in 2016 on the state of sociology in 2106. That sociology is in a sorry state, holds for the Netherlands too: Turku seduced with success a Dutch sociologist to take up the 90+90 topic. All joking apart, I do think that several phenomena indicate that present day sociology is in a sorry state, and I will argue that, as a consequence of the digitalization of everything, sociology's state in 2106 will be much healthier. I thank the organizers of this event for asking me to elaborate on +90

sociology. I hope they do not mind that I bring in -90 sociology too. It was quite decent as regards problems and theories, and +90 sociology will resemble it.

Contemporary sociology's state: five flaws

Five phenomena indicate that contemporary sociology is in a sorry state.

First, for decades now strife about styles of research roils and soils sociology. Before 1968 the division between exploratory and confirmatory research held sway, then the opposition between qualitative and quantitative research gained ground, and now many a methodologist makes much of the merits and minuses of case-oriented and variable-oriented approaches. My take on these quarrels is that as refutations of conjectures are desirable, every piece of research should be taken as exploratory. The pertinent distinction is between researchers who do and do not make much of an effort to write their thoughts down. The retort that it is impossible to state all one's expectations, is a bad excuse for not volunteering any. In the coming decades the distinction between case- and variable-oriented approaches will collapse.

Second, the gap between theory and research in present day sociology is so wide, that it has been called a scandal. One malefactor is the existence of pure theorists, another culprit their preoccupation with concepts. Concepts are illustrated, while propositions are testable, which creates research jobs. Logically related propositions are not difficult to draft, they take shape by staying tuned to puzzling findings. Later I state how concepts go out, and which multilayered theories drive sociological research in 2106.

Third, several things are wrong with how contemporary sociology deals with theories. It is dumbfounding that, although it is known that several theories may be derived from one and the same more general theory, few such exercises are undertaken. Treatises tell students about sociology's sources in the French Enlightenment and in the Scottish Enlightenment, yet do not compare the fluids that flowed from one well with the other, and sidestep the German Enlightenment, as if Durkheim did not reject Kant's idea that the categories of human knowledge are *a priori*, and as if Bourdieu did not seek to supersede in a Durkheimian way Kant's thoughts on beauty. All in all, Students delve so deep into sociology's past, that they ignore the deduction of new specific theories, important for future sociology, from old but general theories. When it comes to logical relations between contemporary theories, the textbook contention that sociology

Wout Ultee is an Emeritus professor of Sociology in the Radboud University, Nijmegen, the Netherlands.

embraces multiple, one another complementing, paradigms misses out on what is wrong with sociology's theories, since most approaches around do not comprise the exemplars of archetypical paradigms. Later on I outline to what extent in future decades, theory tomes and reviews of sociology's history contain a mish mash.

Fourth, present day sociology is in a sorry state as its theories do not link up with its questions. A theory should answer several questions, and proves its mettle when it answers a novel one. For pure theorists this common sense notion excuses dealing with any specific question.

A fifth indication of sociology's sorry state is that there is something fishy about sociology's questions themselves. Leading sociologists admit that sociology cannot be pigeon-holed by its questions, since they are so diverse. I will hold that seemingly disparate problems are sub-problems of long-standing larger problems, and that pure theorists should command problem structures out of the closet. In 2002 Ruhar Vilhjarnsson and Thorolfur Thorlidsson from Iceland, as editors of *Acta Sociologica*, wrote four pages on central issues in sociology. By 2106 most journals will do so almost every decade. The first editors to follow in Islandic footsteps will be the Finns Jani Erola and Suvi Salmenniemi. Later I detail three overarching problems for sociology.

Seven effects of the digitalisation of everything

The prime mover in sociology for the next 90 years is the digitalization of everything, which started in the 1980s. It has seven effects, and they mostly upgrade sociology's present state.

First and second effect: two victories for quantitative research

Digitalization hastens the quantification of long-term societal trends. For some decades now the universities of, among others, the Netherlands and the United States have harbored a sizeable historical sociology, with questions on gradual developments and all-changing events. Since quantitative data have piled up for more than a century in 2106, *as a first effect* of digitalization, historical sociology will merge into quantitative research.

Second, privacy concerns about individual information will weaken qualitative research. In addition, strains of qualitative research will get re-labelled as quantitative, such as verbose studies dealing with questions about the year in which various countries passed a certain piece of social security legislation. After all, the difference between these years for country A and B is a quantitative variable. Quantitative research will be strengthened strongly by public access to data files of national and international statistical offices. Data sets from various non-governmental organizations will do so, too.

Third effect: quantitative research splitting up into a lenient and a strict camp

These victories of quantitative research will not bring eternal peace, fierce fighting among number crunchers will be a *third effect* of the digitalization of everything. The accuracy of non-governmental surveys will be doubted first. The *U.S. Religious Landscape Surveys* downplayed findings of religious decline by dropping longstanding indications of religiosity, and offering shaky new ones. Disputes about indicator accuracy will be followed by wrangling about data collection. Some quantitative sociologists use data for persons right now and taken on their own, while other sociologists go for data on *multiple moments*, *multiple actors* and *multiple contexts*. A superior answer to, say, the question of high employment and underclass formation, requires data on a person's unemployment history, that of a person's spouse, the local labor market, and programs of the regional employment office. Yet, with BIG MAC data discord still strikes. Retrospective data on multiple moments cannot be trusted. But then, drop out plagues panels. This leads to stalemates. On top of strife about indicator accuracy and the right type of data, there will be issues about the statistical models to be estimated for the data and the indicators constructed from them, with pure methodologists insisting that assumptions are violated by various kinds of models. Quite often, the supposedly best kind of model still will be under construction.

All in all, a strict and a lenient camp arise. The data, indicators, and models of the strict camp are logically superior, the lenient camp wishes to know to what extent they actually are so, and no camp tests hypotheses about the direction and size of systematic errors. In 2106 lenient sociologists at an international conference call strict campers overzealous policemen.

Fourth and fifth effects: better teaching of theories and methods

Open access digital libraries with the complete works of famous foreigners and all comments of all their foes will kill the format of student papers for classes on sociology's history and theories. Browsing and searching books by Germans who died two centuries ago - remember I am going on about 2106 - make smooth sailing of papers like "Did Marianne Schnitger write on rationalization before her husband Max Weber did?", and "Which concept of habitus did Bourdieu take from Weber, and which one from Panovsky?". This bad apple in the sociology curriculum was noted by a committee on the quality of teaching programs for sociology in European universities, which issued a report 2026.

As a remedy, a *fourth effect* of the digitalization of everything, those teaching courses on sociology's history and theories began to spread the message that conceptual schemes are out and multilayered theories are in. Since then students are instructed, among others, to state the concept of the logic of the media, as proposed by Manuel Castells, in the form of a proposition on effects of competition between mass media.

They also are to summarize The *Transformation of Intimacy* by Anthony Giddens into one hypothesis, which specifies from what to what intimacy transformed, and what exactly caused it. And from that they are to derive that same-sex marriages in some European countries were allowed earlier than in others.

The digitalization everything had, *fifth*, another and even bigger impact on sociology courses. In 2031 contrarian nerds from method sections in sociology departments at various European universities transformed the indigestible methods books of their pre-digitalization professors. These geeks, who earlier on chatted in the box *Statistical Stupidities of Sociology Students*, did so with an internet course given by telegenic lecturers on *Advances and Blunders in the History of Sociological Research*. The course and its e-books went viral, and since these materials gave big shots a close shave, while also pointing to lesser gods who set things right, the old mish mash in printed textbooks on sociology's history and theories got jettisoned. The premise was that every new method avoids blunders in sociological research, and the course and its e-books pinpointed sociologists who committed them.

I will not detail the blunders highlighted in *Advances and Blunders*, but mention that according to the Finnish nerd in the team, the figures on men with more than one wife, collected by Hilma Granquist from Finland while living in a Palestinian village for three years in the 1920s, are an underestimate. Applying the dictum that women can be studied only by women, Granquist constructed, with the help of local women, trees of descent for the four clans and six other families in the village of Artas. These trees stretch back to 1830, when people returned after a long absence, having fled in violent clashes with other villages about women. Of the 199 married men, 26 were polygamous, or 13%. However, men differ in age and take an additional wife later in life. *Advances* presented a statistical model yielding the right higher estimate. According to a WikiLeak, the Dutch nerd in the team had smugly noted that Granquist did not compute how many village women were in polygamous marriages.

Sixth effect: output of case-oriented research as input for variable-oriented research, and output of variable-oriented research as input for case-oriented research

My report on the sixth effect of the digitalization of everything will be long. In the second chapter of *Advances and Blunders*, its authors explode the distinction between case- and variable-oriented approaches by retelling two episodes from sociology's history.

The first episode plays in the 19th century, and its opening shot presents Auguste Comte and Adolphe Quetelet. The Frenchmen Comte had termed the science of human societies "physique sociale", but when Quetelet from Belgium showed in *Physique Sociale* the yearly stability of figures on crime, marriage and suicide, Comte thought up as a defense the word "sociology". Since Quetelet took his numbers from records kept by governmental offices founded during

Napoleon's rule, Comte did not see the new research method right before his eyes.

The second shot for the episode brings in the obscure Édouard Ducpétiaux and Frédéric Le Play. In 1855 Ducpétiaux, a supporter of Quetelet, published revenues and expenditures for 199 Belgian working class families. In the same year, the French mining engineer Le Play published detailed evidence on the life of 36 families from various European countries. He obtained it, while extracting minerals at far-away places, by lodging with local working class families, where he feasted his eyes, and pricked up his ears. Each of Le Play's case descriptions ends with a list of revenues and expenses. Sitting down with persons to note receipts and expenditures, was another new method for obtaining evidence. The comments of Ducpétiaux and Le Play on the budgets were meager, as if figures speak for themselves.

The final shot for this episode stars Ernst Engel, the director of the statistical office for Saxony. He held in 1857 that Ducpétiaux and Le Play did not carry through the program of the budget method. Calculating for their 255 budgets the percent of all revenues spent on food, he found that as income is higher, the proportion for food is lower. This regularity got known as Engel's law, and became part of a theory on human needs. *Advances and Blunders* commented that Engel, by culling findings from case-oriented research to deploy them in variable-oriented research, undermined the distinction between case-oriented and variable-oriented approaches.

Advances and Blunders also has a three-shots episode in the history of sociological research from the late 20th century. You may know it, but it bears repeating since variable-oriented research turned into case-oriented research, denting anew the distinction between case- and variable-oriented approaches.

Sociology for the 1970s contains papers by John Goldthorpe, with Catriona Llewellyn and Clive Payne, presenting findings on class mobility for a random sample of 12,000 British men in 1978. These men were visited at their home by trained interviewers from a specialized commercial agency, a by then established method of data collection. Since many hypotheses were adduced and scores of odds ratios were computed, these studies were variable-oriented.

Yet all men studied lived in one country, and Goldthorpe, with Robert Erikson and Lucienne Portocarero, published around 1980 in *The British Journal of Sociology* on class mobility in Britain, France and Sweden. These papers recycled the 1972 data by turning 12,000 men into one case, and added to that case two others. According to *Advances and Blunders* variables became cases.

In 1987b Erikson & Goldthorpe (1987a) *European Sociological Review* published papers by Erikson and Goldthorpe on class mobility, adding nine industrial nations to the previous three. These papers contribute to what *Advances and Blunders* calls "variabilization", not at the level of men described by their origin and destination, but at the level of countries. The question in wait is to what extent government by social democratic parties makes for more mobility, and, if so, how: by full-employment policies, or easy access to higher education for poorer people? *Advances and*

Blunders added that it is misleading to say that at first men were studied, and then countries. According to the nerds originally men-in-one-society were cases, and later men-in-several-societies.

Seventh effect: sociology's questions will be about human societies

Finally, by 2106 digitalization had spread so much the rule that sociology's questions should be about societies in the plural, that this adage had become a no-brainer. In contrast, 2016 sociology journals contain lots of papers on data about one society only. These findings may later figure in country comparisons, but a review of papers from 20 years ago, shows that most did not. And findings for one country at t1 were rarely compared to those for it at t2.

The turn between 2016 and 2106 in sociology from one-country questions to questions about similarities and differences between countries and years is not a matter of "If people can do something, they will do it". Sociology raised questions about societies in the plural from its inception. With its focus on societies, +90 sociology resembles -90 sociology. I now invoke two 1926 sociologists. One of them was the first to be appointed to the then only chair for sociology in Europe. That chair was at the *London School of Economics*, and the Finn Edvard Westermarck took it up in 1907. His *History of Human Marriage* from 1891 is down and out now, and so is *The Origin of the Inequality of the Social Classes* from 1938 by his pupil Gunnar Landtman. Both sociologists were eager to take as their cases all pre-industrial societies on earth, read field work reports, collected quotes on bride prices, slavery, etc., and piled quote upon quote in long chapters on one such topic. The number of quotes is staggering.

Why Westermarck slid away in sociology's history has been a topic of discussion. In my view, he did not lose unfairly to Émile Durkheim. Westermarck was a part-time professor, the rest of the year the chair was held by the Briton Leonard T. Hobhouse. In 1915 Hobhouse, G. C. Wheeler and M. Ginsberg (hereafter, HWG) published on *Social Institutions of the Simpler Peoples*. That book applied better methods, turning quotes into tables. An assembly of field work reports by ethnographers yielded a list of 644 societies. These societies were classified after their subsistence technology, and for each society it was determined whether marriages were monogamous, occasionally polygamous, generally polygamous, whether slavery was present or not, and so on. This reduced chapters in Westermarck's books to tables, and made for quantitative findings.

Figure 1 contains HWG's typology of societies after subsistence technology, and Figure 2 their table on monogamy and polygamy after technology. The strategy for obtaining food in societies living by what HWG called hunting, was hunting *and* gathering, with the lower hunters obtaining more food from gathering, and the higher hunters more from hunting. Agriculturalists cleared the soil and planted or sowed cereals and vegetables, in agriculture 1 hunting and gathering was practiced a lot, in agriculture 2 most members of a society lived from working the soil, and in agriculture 3

they did so with plows. Pastoralists herd cattle, in pastoralism 1 agriculture is important, in pastoralism 2 herding is the main activity. Westermarck never applied such a distinction consistently. According to Figure 2, polygamy was most frequent for pastoralists, and least for hunters and gatherers.

HWG's tables contain errors galore, but that comment misses out on the massive move from Westermarck to Hobhouse. Citations became instances of societies, to which scores on variables were assigned, and two variables were cross-classified. In 1957 HWG was outdone by George P. Murdock's *Ethnographic Atlas*. Figure 3 is from Gerhard Lenski's 2005 *Ecological-Evolutionary Theory*, provides an updated taxonomy of societies after subsistence technology, and embodies a proposition about environmental effects on sustenance. Figure 4 is from Lenski's 2015 *Human Societies*, uses Murdock's *Atlas*, and replaces Landtman's slavery chapter.

Sociology's overarching questions from 2016 to 2106

My reading of recent sociology textbooks and journals, makes me venture that order, inequality and change are candidates for sociology's big problems. I will show how their extension and reformulation will steer sociology in the right direction towards 2106.

Inequality as a master question

Inequality is the most obvious master problem. Questions once were generated by the Weberian conceptual scheme that classes, status groups and political parties are dimensions of societal stratification, and lately by the neo-Weberian principle that the economic, symbolic and political resources of the members of a society determine their life chances, with longevity, living standard and life styles as specific life chances. This thesis concerns individuals-in-one-society, and leads to an array of questions I need not spell out here.

Lenski's societal hypothesis in *Power and Privilege* from 1966 was that the more unbalanced a society's power relations are, the more advantageous life chances will be for the more powerful. This hypothesis was specified for various levels of subsistence technology, by stating for each level new resources, the extent they cumulate with old ones, and the tilt in the total power balance. By assuming that power relations become more lopsided with technological progress, Lenski *predicted* that technological progress *increases* inequalities.

Lenski's *findings* showed that standard of living differences were *smaller* in industrial than in agrarian societies. By postulating new, democratic, ideologies, Lenski solves that puzzle, also predicting smaller income disparities when social-democratic parties gain power. Soon after that, quantitative macro-sociologists showed as much. Two new resources of industrial societies, the universal right to vote and widespread professional knowledge, only to some extent cumulate with another new resource, ownership of machinery in the form of stocks.

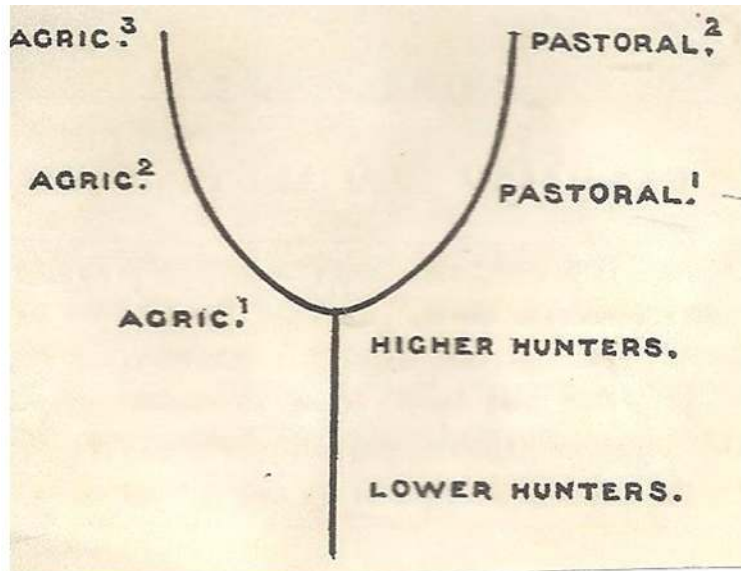


Figure 1. Modes of subsistence technology according to Hobhouse et al. (1915).

CASES OF POLYGAMY, ETC., AS FRACTIONS OF THE TOTAL CASES RECORDED.						
		Polyg. General	Polyg. Occasional	Monog. Regular		
Lower Hunters	...	.29	.....	.57	.....	.14
Higher Hunters	...	.32	.....	.61	.....	.06
Dependent Hunters	...	.33	.....	.555	.....	.11
Agriculture ¹	...	.18	.....	.59	.....	.23
Pastoral ¹	...	.53	.....	.40	.....	.07
Agriculture ²	...	.43	.....	.39	.....	.17
Pastoral ²	...	.74	.....	.26	.....	.0
Agriculture ³	...	.64	.....	.25	.....	.11

Figure 2. The relationship according to Hobhouse et al. (1915) in pre-industrial societies between subsistence technology and the frequency of monogamy or polygamy.

In 2016 Lenski's puzzle solution sounds naïve: economic and political resources cumulate to an at least considerable extent. In future decades a prime inequality question will be to what extent and under which conditions democratic high-tech states will turn into plutocracies (the United States since the Bush family?), and into kleptocracies (like Russia now), once more with high income disparities. Another important question for the coming decades is also about the cumulation of economic with political resources: why did in European societies after World War II class-based voting decline, why did a green left emerge next to the old left, and why did in the 21st century the decent right lose out to the white right?

Cohesion as a master question

Since Thomas Hobbes there is the problem of violence, named by Talcott Parsons as that of order. The first research sociologists narrowed it into the question of who trespasses

laws protecting life and property. Here we find, depending upon the law being broken and the persons doing so, studies on juvenile delinquency, white collar crimes, race riots, and lynching. Of late the question of who gets victimized became prominent. Digitalization will make questions of who murdered whom, as regards sex and country of birth, doable. In future decades questions of violence/order also will be posed as questions of groups against hallmarks of other groups. Arson in synagogues during the Pogrom Night in Nazi-Germany will become a textbook topic, with follow-ups in classes on questions about ongoing attacks in Europe on mosques, as well as on housing for persons fleeing from violence outside Europe.

Since Durkheim, the question of violence/order is only half the problem of (dis)cohesion. He intuited that the members of a society without violence may form a heap of sand. Two of his books involve non-violent relations: economic

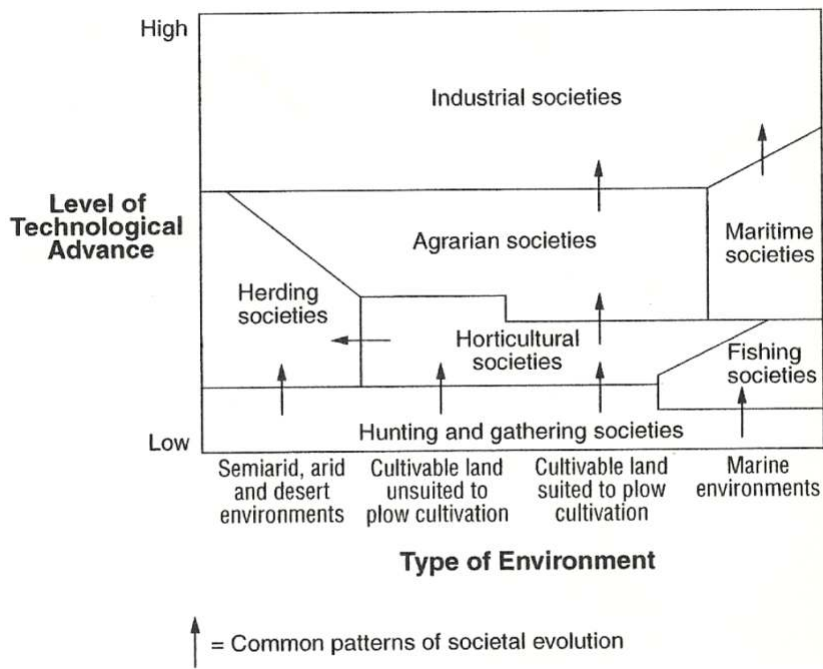


Figure 3. Modes of subsistence technology and environmental influences on them according to Lenski (2005).

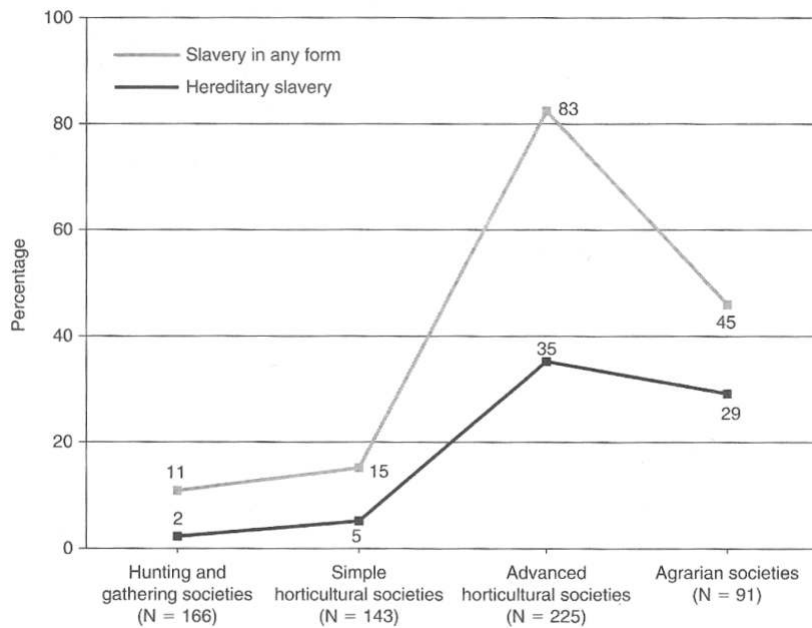


Figure 4. The relationship according to Lenski (2015) in pre-industrial societies between subsistence technology and the frequency of hereditary slavery and any form of slavery.

links generated by the division of labor, and ties forged at religious gatherings. Durkheim also studied questions of sexual bonding: marriage, divorce, parenthood and adoption. His suicide question is about cutting the last connection people have with society: merely living among others. In future decades sociology will study other forms of extreme isolation, like the number of persons found in their house after dying weeks ago without neighbors noticing, and the number of burials and cremations without anyone attending. Digitalization will make such time series available for European capitals. So, the question of (dis)cohesion comprises an array of questions too.

An important (dis)cohesion topic for the coming decades is the paradox of strong individual integration and weak societal cohesion. If all members of a society have strong ties with some other members, and if like links up with like, the cohesion of this society as a whole is weak. In 2000, Robert Putnam depicted trends in the United States, but did not state what went on in this society before people started *Bowling alone*. Since separate black bowling clubs existed, Americans once were *Bowling apart*. Putnam covered up the paradox of strong integration and weak cohesion with the concepts of bonding and bridging capital. In the coming decades the paradox will enter into sociology textbooks, and research papers will be published on flare-ups of violence in segmented high-tech societies.

Rationalization as a master question

Weber in 1920 formulated an overarching question about changes in Western societies involving neither inequality nor cohesion: why did in the West rationalization processes in fields like science, economy and polity, proceed further than in China and India? In coming decades the question of rationalization will be separated from those of inequality and cohesion, with the argument that whereas the last two questions are about persons-in-societies, the first involves persons-in-institutions-in-societies. A list of Western institutions will include: universities with observatories and laboratories, professional police and standing armies, as well as banks, stock exchanges and limited liability companies. Weber assumed that these institutions were more effective and efficient than their predecessors, and in coming decades a flourishing sociology of formal organizations will test so.

In 2106 Weber's sub-question of a trend towards formal polities will have been recast. This will have been done with the thesis from welfare economics that free markets fail when it comes to negative externalities of actions by some people for society at large, and states then step in. Weber held that heads of states differ very much in the aims they pursue. In the line of the Dutch sociologist Abram De Swaan's 1988 *In care of the state*, a big question will become: to what extent do democratic states dampen negative effects of some people's acts, limit collective nuisances, and further the production of collective goods? Specific research questions will be generated by lists of public bads and laws. Three examples: a) to what degree do police lower crime and increase general safety?, b) how did towns come to provide piped water and

sewers, and to what extent did this eliminate contagious diseases?, and c) how did in country A at t1 laws laying down unemployment benefits come about, and to what extent did they lower poverty? Are you reminded of global warming and Paris? If you do, you get how an extension of Weber's problem structure generates questions.

Sociology's multilayered theories from 2016 to 2106

After a review of how sociology's three big questions will unfold until 2106, now two messages about sociology's theories in this period.

First, it will take several decades before referees and editors of sociology journals appreciate how many layers seemingly simply statements consist, and how much information they convey. As a consequence, papers on some sub-problem applying a multilayered theory, may be rejected by general journals as they deal with a minor question only, while specific journals may refuse them because of too much theory. Take the proposition that people live up to group norms, part of old structural functionalism and contemporary cultural sociology. Its layers are recognized if it is phrased as: *all* inhabitants of *whatever* society, to some extent live up to *any* norm of *any* of the groups they belong to, and this extent will be higher if they are more strongly tied, in *whatever* way, to these groups. This hypothesis explains that Catholics less likely die of suicide than Protestants, manual workers from districts with a higher percent of manual workers more likely vote for the left, and juveniles more strongly attached to their parents less likely commit petty crimes. Now guess the publication chances of research applying this hypothesis to the question of which factors explain that secondary school pupils in a sizeable city of some European country decline to sit in class next to a gay or lesbian pupil. The theoretically generated list of factors includes: what others in their class hold of same-sex love, the percent of non-western migrants in their school, their membership of a sport club, parental (dis)approval of homosexuality, and the vote in their neighborhood for Christian parties. The authors of such a paper likely will feel misjudged.

My second post. Westermarck's *History of human marriage* commenced with two pages by Alfred Russell Wallace, the first biologist to propose that new species arise through natural selection under environmental pressures. The application of this hypothesis to human beings by Westermarck and others got known as Social Darwinism. For reasons I need not state here, it went out after World War II. All the same, for some time now, evolutionary biology has been staging a comeback in sociology. An early bird was Lenski, and ecological evolutionism will be a major theory in 2106 sociology. Long before, misgivings about it will have evaporated.

To begin with, evolutionary biology holds that struggles for life lead to equilibria between species, and a recent hypothesis says that diversity of species furthers the reproductive success of all species taken together. I leave it up to you whether this effect of biodiversity, provides a good justifi-

cation for ethnic diversity as a goal in contemporary human politics. But this showing up of a proposition from evolutionary biology in politics learns that links between biological evolutionism and particular kinds of politics are not logically necessary.

Secondly, there are variants of evolutionary biology. For many 2016 sociologists evolutionary explanations imply a hunt for genetic factors. However, for contemporary evolutionary biologists like Richard Dawkins the ultimate causes are environmental. Species emerge through plate tectonics, impact of meteorites, and volcano eruptions, and what not. Human societies become more complex with the invention of more efficient subsistence technologies, and retrogress in the wake of overexploitation of habitats, like overfishing and depleted oil wells.

Thirdly, 2016 inequality sociology tends to reject evolutionary biology, since it would bring in IQ as a genetic all important factor. However, even if people inherit their IQ, the more mating approaches randomness, the less dispersion in the distribution of IQ scores in the next generation. Other hypotheses about social factors affecting IQ are: under strict abortion laws the Zika-virus has more impact, lead in piped water - rising in U.S. cities - lowers IQ, and women above the age of 40 more likely bear a child having Down's syndrome, with a rising percent of births after that age in high-tech societies. Finally, limited supply of oxygen to the brain during childbirth lowers IQ and a society's rate of births with complications varies with its health care system. In 2106 this list of societal influences on IQ distributions will not only be longer and more systematic, it also will be well-known among inequality sociologists.

The move of evolutionary biology to sociology is driven by the proposition that differences between human populations are to be explained by the same factors that account for the diversity of species, to wit environmental factors. Wallace proposed it in 1864, adding that environmental changes rarely change the genetic composition of human societies, and mainly make for temporary storage of new thoughts in human brains, with these thoughts being called by Dawkins memes. This hypothesis provides a bridge to present day cultural sociology, and it will contribute in three ways to existing theories.

First, Peter Hedström dissected the social, and according to analytical sociology's principles, the elements of societies are individuals. Ecological evolutionism analyses in opposite direction: human societies are instances of animal societies, and human societies at higher levels of subsistence technology involve more institutions, with the balance between natural and collective actors in high-tech societies shifting towards the latter. It is a matter for animal ethology, which institutions societies of close relatives of humans have, if any, and how they differ from the limited number of institutions in societies of hunting and gathering humans.

Second, ecological evolutionism harbors the hypothesis that people do not logically derive ideas from observations, at best throw out ideas that do not square with them, and obtain ideas about the unknown by analogies with the familiar. In this it differs from rational action theories. These

theories assume that people think up ideas by random variation. The ancient analogy thesis surfaced in 2003 in *The God Delusion* by Dawkins. Since natural selection works against waste, Dawkins found it puzzling that people spend time and energy on religion. To solve this difficulty, Dawkins replaced the question of religion's survival value by that of whether religion is a by-product of something else. His thesis was that natural selection wired children to follow educators, with as a by-product acceptance of anthropomorphic ideas on the world's origin. Since newborns survive by the actions of their caretakers, they will as adults believe in benevolent creators. Research on origin stories from pre-industrial societies confirms this. In coming decades questions will be raised on analogical reasoning in high-tech societies. Under which conditions do their politicians skip data on legislative effects and ridicule opponents with analogies, and in which settings do even academics use analogies rather than general principles to answer concrete questions?

Finally, ecological evolutionism has hypotheses about effects of natural environments on subsistence technologies. One is about industrial societies, in particular high-tech societies. Their per capita energy consumption is much higher than that of agrarian and other pre-industrial societies, and industrial energy until now mainly came from fossil fuels. At first this fuel was coal, giving a head start to England and Belgium, later it became oil. Like coal, oil is unequally distributed across the world, and that is partly why per capita income now is higher in some parts of the world. Oil wells dry up before 2106, or phased out because of hydrocarbon emission, and new sources of energy will be unequally distributed across the world. Sweden generates hydropower, other countries will be unable to do so. Solar power will expand before 2106, but several high tech countries will have to import it. And it is a windmill that every country without hydropower or solar power, will get by 2106 the energy it now guzzles from windmills. So the ranking of the world's countries after per capita income will change, and in slipping countries cohesion falls and income disparities increase. I hope young sociologists in my audience will devise detailed hypotheses on effects of the worldwide redistribution of energy resources for societal inequality and cohesion.

The five-year *PAESR* award: 2021 to 2106

There is no Nobel Prize for sociology right now, there will be not be one in 2106, and that for Economics was scrapped in the meantime. In 2021 the first *Award for Preservation and Alteration in European Sociological Research* was handed out, and then every five years. The initiative was taken by sociologists who started in academia and made it big in big data, and goes to research superseding some golden oldie. Book titles give a good impression of the best type of concrete research undertaken in sociology from now until 2106. I present them without comments, but except 2021, 2051 and 2106, which I treat last.

<i>Fifteen PAESR awards</i>		1991	Nathalie Heinich, <i>La gloire de Van Gogh</i>
2005	Peter Hedström, <i>Dissecting the social, On the principles of analytical sociology</i>	2091	Van Gogh's ascent and Monet's decline, Time series of museum tickets and poster sales
2026	Human societies and other animal societies, Principles of ecological evolutionism	1994	Sara McLanahan & Gary Sandefur, <i>Growing up with a single parent</i>
1956	Pitirim Sorokin, <i>Fads and foibles in modern sociology</i>	2096	Growing up with four parents
2031	Advances and blunders in the history of sociological research	1993	Anthony Oberschall, <i>Social movements, Ideologies, interests and identities</i>
1936	Edvard Westermarck, <i>The future of marriage in Western civilization</i>	2096	Failures and successes of ad-free society movements
2036	The future of gay marriage and straight cohabitation in European societies	2014	Thomas Piketty, <i>Capital in the twenty-first century</i>
1977	Ronald Inglehart, <i>The silent revolution, changing values and political styles among Western publics</i>	2101	That was capital in the 21st, this will be capital in the 22nd century
2041	Violent revolutions, How in Europe the decent right lost from the white right	<i>Three more awards</i>	
1946	Karl Popper, <i>The open society and its enemies</i>	The first PAESR-award went against the rule that the prize-book would follow up on one of sociology's classics. Its point of departure was a clipping from the <i>Helsinki Times</i> of May 28, 2014, with the heading "Finland has the lowest income inequality in the EU", and invoked a report of Eurostat. <i>Finland dethroned</i> argued against this finding. The study's questions were about the rich, the super-rich and the hyper-rich, it stated that the published data on the income shares of the richest 10% persons-in-households were not accompanied by standard errors, and held that the Finnish samples were not big enough to arrive at reliable estimates for the richest 1% and richest 0,1%. It also pointed out that sample sizes differed a lot from country to country (in 2007: 10,000 for Finland, 80,000 for the Netherlands, 20,000 for Sweden, 5,000 for the United Kingdom, and 100,000 for the United States), particularly if it is taken into account that incomes are not normally distributed, but skewed at the upper end. The sociologists behind the book laid their hands on bigger samples for all EU-countries from tax records, with one of its findings that income inequalities were significantly smaller in the Netherlands than in Finland. Here is the book title and that of the newspaper clipping:	
1984	Peter Blau, <i>Crosscutting social circles</i>	2014	<i>Finland has the lowest income inequality in EU</i>
2046	Open societies without crosscutting social circles	2021	Finland dethroned, When big data on income inequality are not big enough
1913	Émile Durkheim, <i>The elementary forms of religious life</i>	The prize for 2051 did not go either to a study outdoing one of sociology's classics. It argued against a study by Becker, a winner of a Nobel-prize for economics. In <i>A treatise on the family</i> Becker - unlike previous economists and sociologists - did not regard the family as a consumption unit, but as a production unit, just like firms traditionally studied by economics. The award-winning book turned the tables by raising questions about firms as consumption units,	
2006	Richard Dawkins, <i>The god delusion</i>		
2056	The elementary forms of atheist life, Doing without god delusions		
1959	Ernst Topitsch, <i>Vom Ursprung und Ende der Metaphysik</i>		
2061	Analogical reasoning and syllogisms, How Ph.D. holders and politicians argue in high-tech societies		
1966	Gerhard Lenski, <i>Power and privilege, a theory of social stratification</i>		
2066	Resources and advantages, A theory of vicious circles, recurrent effects and compensatory strategies		
1980	James Coleman, <i>The asymmetric society</i>		
2076	The ever more asymmetric EU and US, How corporate actors grab you and me		
1979	Helen Fein, <i>Accounting for genocide, victims and survivors of the holocaust</i>		
2081	Accounting for 21st century mass murders		
1981	Pierre Bourdieu, <i>La distinction, critique social du jugement</i>		
2086	Why Bourdieu became less distinctive, Leading sociologists falling from grace		

offered propositions on consumption functions of chief executive officers of corporations in the Fortune Global 500, and estimated them with data on company jets, five-star hotels for business trips, office furniture, number of private secretaries, and three-martini lunches. An honorary award that year went to research on food in the canteens of the main plants and offices of these corporations. Here are the vignettes:

- 1981 Gary Becker, *A treatise on the family*
 2051 **A treatise on the firm, The CEO consumption function**

The 2106 PAESR-award invoked a paper from 1957, that became famous as a chapter in Goffman's *Asylums* from 1961. Goffman had written down observations while employed in a U.S. mental hospital, and showed that persons who entered it lost so much control over their life, that they became inmates of a total institution. The prize-winning book for 2106 applied this theory to what went on around 2100 in sociology departments of European universities. At the level of each employed person, working hours are monitored by the minute, emails on a regular basis are checked for sociological content, the number of words in publications is counted every year, as well as the number times publications are quoted, time spent on estimating which models with what kind of software is traced regularly, the quality of power-points and examination questions is determined for each semester, while records are kept of how many students each staff member fails, and of how high or low students rate each teacher. When changing jobs between universities, sociologists have to present these materials. The main difference found in this PAESR-award is that members of sociology departments are thrown out more easily than inmates of mental hospitals.

- 1957 Erving Goffman, *The characteristics of total institutions*
 2106 **Are European sociology departments total institutions?**

References

- Castells, M. (1997). *The power of identity*. Malden, MA: Blackwell.
- Dawkins, R. (2006). *The god delusion*. London: Bantam Press.
- De Swaan, A. (1988). *In care of the state: Health care, education and welfare in Europe and the United States in the modern era*. Cambridge, MA: Polity Press.
- Ducpétiaux, E. (1855). *Budgets économiques des classes ouvrières en Belgique: Subsistances, salaires, population*. Bruxelles: M. Hayez.
- Engel, E. (1857). Die productions- und consumtionsverhältnisse des Königreichs Sachsen. Zeitschrift des statistischen bureaux des Königlich Sächsischen Ministerium des Inneren, nr. 8 & 9.
- Erikson, R., & Goldthorpe, J. H. (1987a). Commonality and variation in social fluidity in industrial nations. Part I: A model for evaluating the 'FJH hypothesis'. *European sociological review*, 3(1), 54–77.
- Erikson, R., & Goldthorpe, J. H. (1987b). Commonality and variation in social fluidity in industrial nations. Part II: the model of core social fluidity applied. *European Sociological Review*, 3, 145–166.
- Erikson, R., Goldthorpe, J. H., & Portocarero, L. (1979). Inter-generational class mobility in three Western European societies: England, France and Sweden. *British Journal of Sociology*, 30, 415–441.
- Giddens, A. (1992). *The transformation of intimacy. Sexuality, love and eroticism in modern societies*. Cambridge: Polity Press.
- Goldthorpe, J. H., Payne, C., & Llewellyn, C. (1978). Trends in class mobility. *Sociology*, 12, 441–468.
- Granquist, H. (1931). Marriage conditions in a Palestinian village. *Societas Scientiarum Fennica, Commentationes Humanorum Litterarum* 3.8, Helsinki.
- Harva, U. (1922). Der baum des lebens. *Annales Academiae Scientiarum Fennicae (ser B, XVI: 3)*, Helsinki.
- Harva, U. (1927). Finno-Ugric, Siberian. In J. Canon & J. MacCulloch (Eds.), *The mythology of all races* (Vol. 4). Boston: Marshall Jones.
- Hedström, P. (2005). *Dissecting the social: On the principles of analytical sociology*. Cambridge University Press.
- Hobhouse, L. T., Wheeler, G. C., & Ginsberg, M. (1915). *The material culture and social institutions of the simpler peoples. An essay in correlation*. London: Routledge.
- Landtman, G. (1938). *The origin of the inequality of the social classes*. London: Kegan.
- Lenski, G. (1966). *Power and privilege: A theory of social stratification*. New York: McGraw-Hill.
- Lenski, G. (2005). *Ecological-evolutionary theory: Principles and applications*. Boulder, CO: Paradigm Publishers.
- Le Play, F. (1855). *Les ouvriers européens: Études sur les travaux, la vie domestique et la condition morale des populations ouvrières d'Europe*. Paris: Imprimerie Impériale.
- Murdock, G. P. (1957). Ethnographic Atlas. *Ethnology*, 1-10 (1962-1971), various installments. Data for the standard sample now in the electronic journal World Cultures.
- Nolan, P., & Lenski, G. (2015). *Human societies. An introduction to macrosociology* (12th ed.). New York: Oxford University Press.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.
- Quetelet, A. (1835). *Sur l'homme et le développement de ses facultés ou essai de physique sociale*. Paris: Bachelier.
- Wallace, A. R. (1864). The origin of human races and the antiquity of man deduced from the theory of "natural selection". *Journal of the Anthropological Society of London*, 2, clviii–clxxxvii.
- Westermarck, E. (1891). *The history of human marriage*. London: MacMillan.