www.ees.uni.opole.pl
ISSN paper version 1642-2597
ISSN electronic version 2081-8319
Economic and Environmental Studies
Vol. 16, No. 3 (39/2016), 453-468, September 2016

Sociology of sociology – strengthening the role of social sciences as a new priority of climate and sustainability policy

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Abstract: Today, there are a lot of studies on climate change and sustainability from social sciences' perspectives. Achievements of sociology, psychology or political sciences can be extremely helpful in designing, adopting, implementing and evaluating of effective climate and sustainability policy. However, so far, social sciences, excluded neoclassical economics and dogmatic law, have being marginalizing in the mainstream of climate and sustainability science, politics and discourse. Social studies also have not been included in the IPCC' and other important agencies' reports. In consequence, there is a significant gap in our understanding many facets of climate change and other civilizational threats and possible tools to mitigating them, which may be a reason of the pure effectiveness of the past policies. In this paper I would like to present a few of examples, what social sciences, especially sociology and psychology can contribute to climate and sustainability discourse, as well as, propose hypothesis which could explain marginalization of social sciences today. I will conclude that there are needed more studies about reasons of little widespread social perspective and barriers of incorporating social sciences' approaches to political and non-governmental sphere. In my opinion, in these studies could be used perspectives of cognitive and social psychology or constructivist version of sociology of knowledge, then sociology could became object of its own research, which will result in such kind of "sociology of sociology".

Keywords: Social sciences, sustainable development, climate change, global warming, sociology of knowledge, sustainability science, climate policy, sustainability policy, sociology of climate change, psychology of sustainability.

JEL codes: A14, Q01, D01, D03, A11, A13, A12, D12, D22, O44

1. Introduction

Modern civilizational threats, like climate change, resource scarcities or loss of biodiversity are complex phenomena, embedded deeply in complicated structures of human societies. Therefore, actions which are intended to face these challenges, in huge part, should be based on

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achievements of social sciences, including sociology, psychology and political sciences. However, social approaches, excluded neoclassical economics and dogmatic law (which means positive law in legal acts, out of touch with social context) have been marginalized in current climate and sustainability science, politics and discourse. They also have not been well integrated into IPCC and other important agencies reports, which result in remaining significant gap in our understanding of many facets of climate change and other civilizational threats (Dunlap and Brulle, 2015: 1-5).

In my opinion it is very negative situation, because neglecting of research of this areas of knowledge could result in low effectiveness of sustainability policy. In second part of this paper, I would like to consider about causes of faint popularity of sciences like sociology, psychology and political sciences, and, on the other hand, causes of dominating economic and technologic view in current policy making. For analytical purposes, wherever I am writing "social sciences", I mean social sciences excluded neoclassical economics and dogmatic law (thought I qualify both as social sciences).

In the first part of the paper, I would like to present selected achievements of sociology and psychology of sustainability to stress, that these research could be very valuable for current efforts to face global threats. Social sciences very often challenge dominating economic and technologic approaches and it could be a great complement for current studies and actions, but also shed light on previously rather unknown, social aspects of climate and sustainability policy.

2. Past attempts of integrating social sciences with climate and sustainability research

There is significant social and psychological literature about problems of climate change and sustainability, including applied research. Attempt to summarize these achievements have made researches from American Sociological Association, which has resulted in book titled "Climate change and Society. Sociological perspectives". This and next sections are mainly based on this work.

Riley E. Dunlap and Robert J. Brulle (2015: 1-2) have tried to analyze current state of social sciences in field of climate change and sustainability. Despite conclusion about marginalization of them in this fields, they have showed, that also past attempts to integrating social sciences with broader research on climate change and sustainability are not well improving the situation. Sustainability Science stream for example, despite its interdisciplinary character, is dominated mainly by natural sciences' approaches and marginalize various, unique approaches

of social sciences. Moreover, it is based in huge part on systems theory which in sociology is very often challenged.

Another application of social perspective to climate research – individual-level analysis is criticized because it "tends to neglect institutional, societal and cultural perspectives, and thus limits the range of analyses". Bronislaw Szerszynski and John Urry according to it, have written about economics, that it: "has led to a focus on human practices as individualistic, market-based, and calculative, and has thus help to strengthen a tendency toward a certain set of responses to climate change, ones based on individual calculation, technology and the development of new markets". They also noted that: "Most of the time most people do not behave as individually rational, as separate economic consumers maximizing their individual utility from the basket of goods and services they can purchase and use, given fixed and unchanging preferences. People are creatures of social routine and habit, and of fashion and fad. These patterns of routine and fashion stem from how people are locked into and reproduce many different kinds of social institutions, both old and new. These include families, households, social classes, genders, work groups, ethnicities, age cohorts, nations, and scientific communities, NGOs and so on. But people are also locked into wider systems, including cultural worldviews and technological systems, that shape people's sense what is permissible, desirable and possible". Under criticism also is simple psychological technics based on providing people selected information to reshape their behavior, because they are very often ineffective.

Last considering approach was named "post-political". This term is describing way of framing official reports and public discourse, which avoid broader discussion about political, economic and cultural context of climate change, treating it, like only natural and scientific phenomenon. This way of discussion in fact eliminates any contestation of current liberal, capitalist and market system and reinforces *status quo* without deeply deliberation. "Social critic Naomi Klein acknowledges that considering policies that challenge the current economic system is deemed 'politically heretical'. Yet, ignoring them narrows the range of solutions that are considered and forecloses policy options. The result is that the dominant ideology of free-market fundamentalism remains unexamined and invisible. The value and necessity of economic growth are taken for granted, and the current neoliberal economy is assumed to be a fixed and immutable system whose imperatives are logical necessities upon which all climate change policy options are to be formulated" (Dunlap and Brulle, 2015: 12-14).

Post-political approach also could lead to neglecting real drivers of climate change. Charles Perrow and Simone Pulver (2015: 63) have written: "Graphs of historical emissions

clearly show that the largest upswing in global GHSs (greenhouse gases – A.S.) came with the Industrial Revolution, when fossil fuel energy was first harnessed on a large scale to support industrial production. This time in history also coincides with the development of capitalism, with industrial organization, and with the rise of markets as the dominant mode for structuring economic relations. Despite this clear linkage, action by capitalist, industrial organizations in markets has been only a peripheral focus in analyzing the problem of global warming. The practices and politics of polluting organizations are ignored in favor of abstract discussions of markets, economies, game theory, and the consumption choices of individuals. When market organizations are mentioned, it is mostly in the context of voluntary mitigation initiatives". And later, they have said: "For example, the most recent Summary for Policymakers of 'The Mitigation of Climate Change', the Intergovernmental Panel on Climate Change (IPCC) Working Group III contribution to the Fifth Assessment Report (AR5), acknowledges that 'in many countries the private sector plays central roles in the processes that lead to emission as well as mitigation'. Unfortunately, the AR5 chapter linked to this summary statement does little to elaborate the private sector's contribution to emissions. The major polluting organizations whose profitability is directly tied to ongoing reliance on fossil fuels and their efforts to maintain the status quo go unmentioned. Instead, the report describes market organizations as contributors to carbon mitigation efforts, profiling public-private partnerships and private-sector governance initiatives". I have quoted these broad comments, because I think, that without pointing to people and organizations most responsible for greenhouse gases emissions, further scientific and political efforts to mitigating climate change could be ineffective. I think, that scientists, politicians or bureaucrats must not, in the name of political correctness, avoid talking about lobbing of fossil fuels companies and other actors, which are responsible for slowing down and blocking current mitigating efforts, especially, when it goes to such lethal for billions of people phenomenon, like global climate change.

3. The role of social structures and habits – sociological perspectives

Consumption is one of the crucial problems of sustainability. Sociological research often challenge analyses of consumption' causes based only on rational-actor model or relationship between attitudes and acting, and policy using only information and economic incentives to persuade people to more sustainable behavior (Ehrhardt-Martinez et al., 2015a: 115-117). One of the most important sociological theories of causes of consumption is based on Thorstein Veblen's "Theory of the Leisure Class" (1899) and say, that visible consumption is way to gain

social esteem, status and position. Thus, consumption may be intensified as a result of inequality, advertising or marketing, because social status is relative and this fact may lead to consumption competitions. This mechanism can lead both to increase "green" behaviors, when they are considered to be connected with high social status (like in USA) and decrease such behaviors, when for example energy saving are considered as behavior of poor people. Then, policy should address such negative beliefs to be effective (Ehrhardt-Martinez et al., 2015a:100-101). However, Lindsay E. Young and Robert J. Brulle "find that over the period from 1900 to 2000, advertising outlays were significantly related to consumption expenditures and advertising has been far more effective in spurring demand for energy-intensive luxury goods (household appliances and cars) than for necessities" (Ehrhardt-Martinez et al., 2015a:102). Therefore, maybe there are needed some limitations for advertising and marketing activity? Anthony Giddens for example has said, that, in the context of huge problem of obesity, practice of placing sweats near checkouts in supermarkets to persuade people to buy them, should be prohibited or hindered (Giddens, 2015: 120).

In the 1990s new approach has appeared, later named practice theory. It walked away from studying conspicuous form of consumption toward inconspicuous consumption based on daily, thoughtless practices and routines derived from spatial and temporal organization (time pressures), forms of technologies, comfort, cleanliness and convenience (the last free particularly salient). Research have showed a number of regularities. "Temporal patterns associated with commuting to school and work create rush hour traffic patterns that increase transportation-related energy demand as a result of traffic congestion, engine idling, and longer hours of vehicle operation". This approach could be used in policy design: "Southerton, Mendez, and Warde (2012) suggest that the resource intensity of earing practice could be affected by policies that influence the timing of eating events. Compared to Spain, eating patterns in the United Kingdom are far more individualized–at no time of the day were more than 20 percent of the U.K. population eating, compared to two peaks in Spain where 40 percent of the population were eating. Individualized patterns can even out peak loads in energy consumption, but collective timings present opportunities for resource efficiencies" (Ehrhardt-Martinez et al., 2015a: 103-106).

Sociological perspective can also shed light on effectiveness of private sector response to climate change. Perrow and Pulver (2015: 71) have written: "While large market organizations may have some say in choosing their carbon strategies and some influence on policy environments, for most organizations patterns of carbon pollution and response to climate change

are determined by the institutional environments in which they operate". And later: "Environmental sociology offers two competing theories of the institutional contexts that guide the environmental behavior of market organizations in capitalist economies. Ecological modernization theories focus on the potential of greening capitalist economies via radical resource productivity driven by a partnership between firms and regulators. In contrast, treadmill of production theorists argue that the industrial logic of capitalist economies created conditions under which firms will continually increase their impacts on the environment, in the form of resource withdrawals and waste additions. Any efforts to enhance resource productivity will be overwhelmed by expanded production. Moreover, governments also rely on expanded production and thus are reluctant regulators. Global and cross-national comparative studies of carbon emissions trajectories suggest that the treadmill logic predominates. For example, worldwide GHC emissions increased 6 percent from 2009 to 2010, worse than the worst-case scenario predicted by the IPCC. The increase is attributed to economic growth, with the United States and China accounting for more than half of the worldwide increase".

Therefore, in the opinion of Authors, "market organizations will not act independently to reduce emissions at rated needed to prevent severe impacts of climate change. Reviews of organizational greening validate this skepticism" (Perrow and Pulver, 2015: 83). Despite that more ambitious climate policy to change mentioned market environment in United States has been blocked by fossil fuels companies and conservative politicians (Perrow and Pulver, 2015: 72-74), some sociologists see more progress at local level, for example subnational governments and cities (Perrow and Pulver, 2015: 84-85; Ehrhardt-Martinez et al., 2015b: 226-227). Though there are opinions, that because of global character of climate change, these achievements are insufficient, they may lay the groundwork for national and international policies, which are essential.

4. A positive attitude and understanding of diversity – psychological perspectives

As I have mentioned, also psychology has much to offer for sustainability policy and practice. In contrast to sociology, it is more focused on individual-level analysis and internal experiences of humans. On the one hand, this approach is more limited as a tool of macro-policy, but on the other, is more useful in social interactions in smaller groups and for sustainability leaders (Riley and Dunlap, 2015: 9-11). Thus, it is a great and essential complement to sociological perspective.

Niki Harré (2012: 7-8, 12, 25-26) for example, stress, that effective strategies to inspire sustainability behaviors should be based on a positive attitude, emotions and states, like "flow" (natural, self-motivating willing to do something with total concentration and motivation and self-discipline is unnecessary). She said, that positive approaches are inspiring, uplifting, engaging and fun, instead negative, like shock, fear, anxiety and anger are forms of human pain. Research have showed, that positive emotions are conducive to creativity and change, in contrary, negative are connected with narrowly view and passivity (Harré, 2012: 12-24; Giddens, 2010: 43). These suggestions may seem obvious, like a lot of other suggestions of psychology, but in fact, like has noted Dale Carnegie (2012: 66) according to his guideline, that if we want convince somebody to do something, we should accept his point of view and interests, most people in most situation neglect them. Thus, the problem is not in lack of knowledge, but rather in lack of consistent practice. An example would be this year's poster of "The Day of Earth" in Warsaw, which was showing the Earth with gas mask, which are suffocating in the smoke from the chimneys. Despite, it has drawn attention to important problem of "low emission", it was rather not effective in motivating people to participation in the event.

Sustainability should not also be treated like a kind of problem, but rather like collective enterprise. When people are focused on the problem-approach, they may argue about character of this problem (for instance what is most important, problems of economy or loss of biodiversity?) and possible solutions (for instance technical or social solutions?). Harré (2012: 7) has written: "The problem will continue to shift and the solutions will always be contentious. People will mock you and prove you wrong. If, on the other hand, you see yourself not as solving a problem, but as helping to create a viable alternative to our current way of life, the meaning of what you do changes". Like "advocates of sustainability" we also should remember, that we are only humans and we do not have the "ultimate truth about the way things are or the effect of possible interventions on the complex systems we are part of". So, it is important, that we will be a part of negotiations with equals and understand, that always we can be wrong (Harré, 2012: 8-9).

Psychology of sustainability also has tried to answer, whether people who work and promote sustainability in multinational companies really pursue to change or doing it only for profits? Steve Schein (2015: 181) during his research has interviewed 75 sustainability leaders, most of them from multinational companies. The studies have showed, that they are people really concerned about environmental and social sustainability of the world. A lot of them expressed their ecocentric worldviews and ecological selves. Mark Koltko-Rivera (Schein, 2015:

32) "defines worldviews as a set of assumptions about physical and social reality that have powerful effects on out cognition and actions. He describes worldviews as our total outlook on life, society and its institutions". I think, that this term could be connected with "paradigm" notion, used for example by Stephen R. Covey (2015: 19-20) and can be very helpful with understanding behaviors of other people, because from worldviews or paradigms comes our attitudes and actions. For example, when we have paradigm, that fire is danger, we will avoid it, or when we have paradigm, that climate change is real, is more probably, that we will use more public transport, but change of paradigm (of worldview) is sometimes very difficult (Covey, 2015: 26-27).

Back to the main thread, Schein (2015: 72-79, 109-113) has written, that a lot sustainability leaders have worldviews (paradigms), with knowledge, that society and economy are embeddedness in natural environment, with an awareness of the vulnerability of planetary ecosystems, with a belief in the intrinsic value of nature or with enhanced systems consciousness. They also have expressed "post-conventional" worldviews, for example a greater awareness of context (like cultural) and diversity of worldviews (and thus, skill of understanding other people views and needs). In my opinion, these studies could be very helpful, both for better understanding current sustainability leadership and like an example for future sustainability leaders. I think, that for climate and sustainability practitioners could also be useful books about effective interpersonal relations, for example wonderful book of Dale Carnegie (2012) – *How to Win Friends and Influence to People*.

When it goes to influence human behaviors, I think that very valuable is observation of many psychologists, that humans have strong tendency to imitating each other's and subordinating social norms. Research for example have showed, that people decrease or increase their energy use depending of received information about average use in their neighborhood (Harré, 2012: 34; Schultz, 2007: 432-433). Important role in diffusion of information and shaping human behavior play also interpersonal informational networks. Research have showed, that information passed on through strong social tie have stronger impact on decision of adoption, rather than passed on through weak ties. At the same time, negative advice about information have been passed frequently passed on through weak ties, instead, positive advices people more frequently were receiving through strong interpersonal ties (Weenig and Midden, 1991: 739-741). These findings can be used to form more efficient policies of consumption's reduction. For example, one of studies has showed, that people who consume a lot of energy make a quite savings when on their bills will appear face wrinkled brows when average consumption is exceeded and smiled face if not (Giddens, 2010: 120). But, as I have mentioned, this mechanism

could has negative effect in situation, when somebody's level of consumption is lower than average.

5. Economic, politic and cultural reasons of marginalization of social sciences

In my opinion, crucial problem of use social sciences in policy-making process is not lack of valuable theories or empirical research, but rather poor widespread of them. There also are problems of technical and political applicability of social research into policy, but I think it is less important, because when research of social sciences is widespread and a lot of people are interested in using them, technical and political problems of their applicability will be, as far as possible, solved. Now, the most urgent issue is to understand and to solve the problem of poor widespread of social sciences view in policy-making processes, mainstream of science and public discourse – all of them in climate change and sustainability context. I would like present a few of hypothesis about problems of popularity of social sciences (still understood as social sciences excluded neoclassical economics and dogmatic law) and later, come back to applicability problems.

Science can be treated as an important part of modern culture, in this case, of culture which constitute western civilization (Golka, 2012: 14-15). I think, that widespread[1] of neoclassical economic approach in sustainability science and policy, and simultaneously marginalizing of social sciences in this fields is not a temporary fashion but phenomenon rooted in a social context, especially in economic system, to what drew my attention Kazimierz W. Frieske during conversation with me (2016). Frieske mentioned that there are two main theories of relations between culture and economy. First, represented by Karl Polanyi (1957) and Mark Granovetter (1985), which can be called "embeddedness". And second, represented by Margaret Archer (Zeuner 1999), Michael J. Sandel (2012) and, in my opinion by Benjamin R. Barber (2000).

First paradigm stress uneconomical social factors in which economical processes are embedded. Polanyi for example argued, that in natural conditions economic system is subordinate social relations, not market processes, and till to nineteenth century "though the institution of the market was fairly common since the later Stone Age, its role was no more than incidental to economic life". He also claimed, that interventions of governments in the nineteenth century

[1] According to the distinction made by Robert P. Rich, it means only getting knowledge to recipients. Rich also singled out "use" and "effect" of knowledge (Frieske 1990: 152).

and imposed the radical free market organization of society, which was annihilating social relations and structures, lead to crisis of that civilization and resulted in two world wars (Polanyi, 1957: 43, 249-250). Granovetter (1985: 504) whereas has more moderate opinion, but acknowledged that: "most behavior is closely embedded in networks of interpersonal relation", in which he included behavior on the marker. He emphasize the role of trust in functioning of economy, which are built mainly by social interactions, less by generated morality or institutional arrangements.

On the other hand, second paradigm more stress results of the functioning of the economic system *per se*. In my opinion it is not contrary to first, only it is focused on different sphere, maybe because of scale of changes in the end of the twentieth century. Anyway, I think it will be more helpful to analyzing of causes of widespread of neoclassical economic views today. Margaret Archer (Zeuner, 1999: 80) argue that "cultural conditions cannot in themselves determine whether cultural change will take place. Change presupposes sociocultural interaction, and interaction will be characterized by attempts to protect or increase vested material interests. Thus, sociocultural interaction is determined by material interests". In the same way she explained maintaining a culture scheme. Therefore, I think that acting of interests groups which depends on the liberal economy, like for instance big corporations or liberal parties, can partly resulting in domination of neoclassical economical approaches in public discourse and sustainability policy making today.

Whereas Sandel (2012: 5-6) is focusing directly on the impact of the free market economy on the culture, including morality and other social norms: "As the cold war ended, markets and market thinking enjoyed unrivaled prestige, understandably so. No other mechanism for organizing the production and distribution of good had proved as successful at generating affluence and prosperity. And yet, even as growing numbers of countries around the world embraced market mechanism in the operation of their economies, something else was happening. Market values coming to play a greater and greater role in social life. Economics was becoming an imperial domain. Today, the logic of buying and selling no longer applies to material goods alone but increasingly governs the whole of life. It is time to ask whether we want to life this way". In a similar vein, Barber (2000: 377) criticized market economy, in its unbridled form, and claimed that: "(…) economical totalitarianism of unbridled market is currently attempting to subordinate politics, society and culture to requirements of, overwhelming its vastness, market (..). He also emphasized the "imperative of sale" in the functioning of the market economy.

6. Ideological and scientific reasons of marginalization of social sciences

Aside from economic system and its attractiveness for numerous interest groups, including corporations and politicians, which is, in my opinion, the most important cause of dominating of economical view in sustainability policy and discourse, I want to present other explanations. Riley E. Dunlap in response to my email-question (2016) about impact of social structures, norms and culture on popularity of sociology has written: "As you suggest, the norms of society don't favor us, especially these days as neoliberalism or market fundamentalism is stronger than ever and 'individualism' is the dominant ethos. In fact, as societies become more 'Westernized' they seem to increasingly take a non-sociological view in which individuals are seen as solely responsible for their fates in the world, denying any role that upbringing, social structure and especially inequality play in affecting individuals' life chances. So sociologists talking about social structure and the like are inherently not popular I think".

Frieske (2016) also drew attention to highly mathematisation of economical sciences, what consequently may delivering guise and sense of their reliability. Indeed, Golka (2012:74-80) is describing rationality as one of the main features of western civilization. He quoted opinions of Max Weber, Lewis Mumford and Hans Georg Gadamer who are stressing the role of quantitative estimations and exact sciences in the western culture.

These were external to social sciences factors which could play an important in their marginalizing in the sustainability discourse and policy, and supporting dominating position of economics in these fields. However Dunlap (2016) make also arguments considering internal factor of sociology, in the context of climate change and environment. First of them is dominating of long time, since emergence of environmental sociology in last half of 1970s, Human Exemption list Paradigm (HEP) (Dunlap and Brulle, 2015: 16) which was focused only on social problems of environment, neglecting interactions between humans and natural environment. Second is surge of constructivist paradigm in 1990s which, despite its contribution, was focusing on social construction of reality, knowledge, norms and values, simultaneously neglecting contribution of natural sciences and doubting in its studies results. This approach has its continuity today as "environmental agnosticism" (Dunlap, 2010: 20-23; Dunlap 2016). When it goes to constructivist surge in 1990s Dunlap (2016) written: "And more recently, especially in the 90s, sociologists' main response was to conduct constructivist analyses of climate change and science. Some were very useful, but ultimately such studies tended to marginalize sociologists as climate scientists, activists and policy makers accepted the reality of anthropogenic climate change and found it odd that sociologists were still critiquing climate science".

7. Barriers to using and effecting of social sciences.

Above, I have tried to discuss hypothetical reasons for poor widespread of social sciences' approaches in climate and sustainability scientific, political and public discourse. I also have stressed, that in my opinion is the crucial problem of using social sciences in these fields. However, I think, that it is worth considering, what problems of use and effecting (within the meaning of Robert P. Rich) of social sciences in social life, especially within public administration may arise in situation, when social approaches would be widespread?

The answer of this question can give excellent book of Kazimierz W. Frieske – "Socjologia w działaniu. Nadzieje i rozczarowania" (eng. "Sociology in action. Hopes and disappointments"). In the book, Frieske has described extensive attempt to involve social scientists in policy-making process in United States and has present a number of empirical studies on this topic. In the United States in 1960s the welfare state became more active because of broad areas of poverty and occurred a lot of social conflicts. It entailed undertake "War on Poverty" by John Kennedy and a lot of social policies' programs. According to tradition of "New Deal" policy of Franklin D. Roosevelt and Jerome B. Wiesner's report, it came to close cooperation between social scientists, including sociologists and psychologists, and public administration. Spends on social sciences have also significantly increased (Frieske, 1990: 76-80).

Despite high popularity of social sciences in this time, collaboration between scientists and bureaucrats proved largely disappointing for both parties. Politicians and bureaucrats stressed little use of knowledge, on which they spend a lot of money. Scientists, that their advices were not adopted or implemented. However, another bureaucrats said, that crucial contribution of social sciences in this case, was introduction of a new point of view in the thinking of politicians and bureaucrats, and that this fact sometimes had impact on decision making-process (Frieske, 1990: 90, 95-97). These experienced have showed, that in the political and administrative spheres are a number of barriers for using and effecting of social sciences' recommendation, despite familiarity with them.

Firstly. in political decision-making process scientific recommendation are only one factor which are taking into account. In this process very often more important is compromise between various actors, than scientific truth. Moreover, social recommendation are sometimes very far-reaching, and their realization require deep reforms, which could be "lethal" for political carriers of politicians and bureaucrats. Secondly, when it goes to studies which are evaluating policy, politicians sometimes can select these studies, which are appropriate to support

their policies and reject which do not give that support. Thirdly, Jack Knott and Aaron Wildavsky introduce division into "social engineering" and "educational" use of knowledge. In the first option, scientist play a role of contractor which is realizing the order of principal, for example research needed to current policy. In the second option, scientist is not bound by order of principal and he can freely express his opinion about problem of politicians or bureaucrats. In this second example, more important contribution of social sciences is possibility for politicians and bureaucrats see their policies and aims through more sociological or psychological lens, but ultimately decision about level of use of these approaches belongs to them (Frieske, 1990: 101-112).

Later scientific research has showed, that there are a number of factors which influence level of scientific knowledge use. Knowledge is more often use by politicians and bureaucrats when it is helpful and easy to adopting, but also when it is compatible with political and organizational interests of addresses. It can be used directly, as argument in discussion about current decision but indirectly, through implement to "working knowledge" (knowledge, which is using during daily work and other activities – A.S.) of addressee. Very important role can play also direct interactions between scientist and addressees of knowledge, personal commitment of addressees and "personalization" of knowledge at all. Scientific knowledge is also easier accept, when it is compatible with past convictions of addresses and their confidence in source of knowledge. It stressed also possibility of use of knowledge in current budget and organizational frame and understandable and clearly form of it presentation (Frieske, 1990: 142-158).

8. Conclusion and recommendation for future research

To sum up, in the paper I have tried present potential usefulness of social knowledge in climate and sustainability practice. There are valuable theories and empirical studies of sociology, psychology or political sciences which directly concern problems of sustainability, like for example problems of consumption or efforts of private sector to mitigate climate change. Social knowledge which is not directly concerning global problems also could be helpful, like for example knowledge about effective interpersonal relations. These perspectives can make great contribution to current climate and sustainability science, policy and discourse, which could make them more effective. However, these approaches, so far, are marginalized in the mainstream of climate and sustainability discourse. I have presented hypothetical reasons of this

state, with impact on science and culture of current neoliberal market economic system, as possible more important.

Despite these facts, in my opinion many in this matter changes. When it goes to economic, political, ideological and cultural factors, negative changes of environment (Giddens, 2010: 124) and last economic crisis (Sandel, 2012: 6) can show, that the exclusive reliance on liberal market economy is not advisable and there are need to go beyond economical and technical approaches. On the other hand, there are quite progress in the studies in sociology (Dunlap 2010: 15) and today there are such approaches, like New Ecological Paradigm (NEP) or "environmental pragmatism" (Dunlap and Brulle, 2015: 16; Dunlap: 23) which are more focused on both, social and physical aspects of human-environment relations and trying to work out helpful solutions for practical climate and sustainability policy.

Moreover, the economics itself is developing new trends, like for example ecological economics (1980s), new environmental economics (1990s) and economics of sustainable development (Rogall, 2010: 27-28). They are stressing need of interdisciplinary approaches and thus, would be more willing to collaboration with other social sciences. However, these new trends are connected with "sustainable science" stream, which can be dominated by natural science and economic perspectives, and system theory. Thus, there are rather need for equal collaboration between sociology, psychology, economics and natural sciences, than "annexation" of sociology and psychology to sustainable science, with deprivation their original views. New macroeconomic models also being developing, for example by Tim Jackson (2009) in his *Prosperity without Growth. Economics for a Finite Planet*.

I suppose, that policy of public authorities could also make change in this context. Financial support and more job places for social scientists, but also legal procedures taking into account sociological, psychological and political science assessments would have positive effect. The same tools supporting social sciences can also use NGOs, companies and other organizations, like universities which can promote social sciences among students. Very important is also willingness of economists, natural and social scientists themselves to collaboration and exchange of experience and knowledge.

And finally, I would like to stress, that there are needed more research to verify hypothesis of potential reasons of poor popularity of social sciences and to propose potential ways to improve this popularity in sustainability, as well as in other contexts. Though, in my opinion widespread of social perspective is currently the priority for climate and sustainability policy, practical using of social knowledge also is not easy. As I have written, there are significant number of research about these issue, however, I think that here also are needed more studies

about these problems in context of climate and sustainability practice. In my opinion, very valuable could be case-studies about use and effectiveness of social knowledge in practice of central institutions of state, but also in local governments and NGOs, which could present possibilities of use social sciences to facilitate various actions to achieve sustainability (I am supposing that in NGOs could be familiar barriers of use and effecting of social sciences like in political and administrative spheres). I think, for all these research could be helpful approaches of constructivist version of sociology of knowledge (Frieske, 1990: 187-199), in this case "sociology of sociology" or cognitive and social psychology. Such studies could also improve situation of social sciences' use, themselves. I hope, that my paper will be a part of these efforts.

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Socjologia socjologii – wzmocnienie roli nauk społecznych jako nowy priorytet polityki klimatycznej i zrównoważenia

Streszczenie

Obecnie istnieje wiele badań społecznych poświęconych problematyce zmian klimatu i zrównoważenia (nie chcąc używać nieco oksymoronicznego wyrażenia „zrównoważony rozwój"). Osiągnięcia socjologii, psychologii i nauk politycznych mogą okazać się niezwykle pomocne w projektowaniu, adopcji, implementacji i ewaluacji skutecznej polityki dotyczącej tych sfer. Jednakże, jak na razie, nauki społeczne, nie licząc ekonomii neoklasycznej i dogmatyki prawa były marginalizowane w głównym nurcie nauki, polityki i dyskursu dotyczących klimatu i zrównoważenia. Dorobek nauk społecznych nie został także uwzględniony w raportach IPCC i innych ważnych instytucji zajmującymi się tymi problemami. W konsekwencji, istnieje istotna luka w naszym rozumieniu wielu aspektów zmian klimatu i innych zagrożeń cywilizacyjnych, a także w możliwych narzędziach do przeciwdziałania im, co może być powodem skromnej efektywności poprzednich polityk. W niniejszej pracy chciałbym zaprezentować parę przykładów tego, co nauki społeczne, a szczególnie socjologia i psychologia mogą wnieść do dyskusji na temat zmian klimatu i zrównoważenia, a także przedstawić hipotezę mogącą wyjaśnić marginalizację nauk społecznych, z którą mamy obecnie do czynienia. W podsumowaniu zawrę tezę, że potrzebnych jest więcej badań na temat powodów małego rozpowszechnienia perspektywy nauk społecznych i na temat barier we włączeniu podejścia nauk społecznych do praktyki politycznej i działalności pozarządowej. W mojej opinii, w przyszłych badaniach mogłaby zostać wykorzystana perspektywa psychologii poznawczej i społecznej, a także konstruktywistycznej wersji socjologii wiedzy. W ten sposób, socjologia stałaby się przedmiotem badań samej siebie, co skutkowałoby istnieniem swego rodzaju socjologii socjologii.

***Słowa kluczowe**:* nauki społeczne, zrównoważony rozwój, zmiany klimatu, globalne ocieplenie, socjologia wiedzy, nauka zrównoważenia, polityka klimatyczna, polityka zrównoważenia, socjologia zmian klimatu, psychologia zrównoważenia.