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Practice-oriented governance key to low-carbon living

SOCIOLOGY

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Apart from industrial and agricultural production, humanity's lifestyle carbon footprints also have notable impacts on climate change.

According to the Emissions Gap Report 2020 released by the United Nations Environment Programme, household consumption accounted for around two-thirds of global greenhouse gas emissions, and it was estimated that key sectors, including mobility, residential energy use, and food, comprised approximately 17%, 19%, and 20% of lifestyle emissions, respectively.

The report further points out that on an aggregate level, compliance with the 1.5°C goal of the Paris Agreement will require reducing consumption emissions to a per capita lifestyle carbon footprint of around 2 to 2.5 tons of CO₂ by 2030, and an even smaller 0.7 tons by 2050.

Promoting low-carbon transition in daily lifestyles is significant to China's long-term objective of achieving carbon neutrality, or net-zero carbon emissions, by 2060.

Practice matters

The transition to low-carbon lifestyles is ultimately reflected in human actions. In other words, individual actors should take the initiative to reduce or give up actions that will cause high carbon emissions in everyday life, such as the use of petrol cars, while turning to low-carbon options, like walking, bicycling, driving new-energy automobiles, and taking public transportation.

What factors determine individuals' low-carbon lifestyles? Previously, social scientists often grounded themselves in the "attitude-action" framework to interpret the generation mechanism of low-carbon actions. As the core opinion of the framework, the attitude and values held by individuals are a key factor influencing their choice of actions.

On this basis, individuals' low-carbon lifestyles are driven by their mentality. When such concepts as "environmental protection" and "low carbon" enjoy popular support, low-carbon actions will naturally prevail in society. Thus, it is essential to beef up efforts in education and advocacy, particularly on climate change, to raise the environmental awareness of the whole society, thereby advancing low-carbon transition in peoples' lives.

However, many empirical studies suggest that there is an apparent gap or inconsistency between environmental awareness and action. In the late 1980s, some American scholars, by comprehensively analyzing 128 environment-related local surveys, found that the average coefficient of correlation between environmental awareness and action was only 0.35.



Residents ride bikes in Beijing on Aug. 25, 2021, which was designated as National Low-Carbon Day. Photo: CFP

According to the Chinese General Social Survey of 2003, 2010, and 2013, similarly, environmental awareness was not a determinant to accurately predict environmental actions of Chinese people. In 2019, the Research Center for Resource Economy and Policy at Beijing Normal University concluded from a survey of citizens in Beijing that information disclosure, education, and advocacy of low-carbon mobility failed to bear significantly on citizens' choice of low-carbon commuting actions.

Generally, environmental awareness is not as capable of translating into individuals' actual low-carbon actions as the attitude-action framework expected. It still lacks empirical support to promote the low-carbon transition of daily life by adjusting people's way of thinking.

Thereafter many environmental social scientists reflected deeply on the framework's failure to effectively explain individuals' low-carbon actions. In the protracted debate, the social practice theory (hereinafter referred to as the practice theory) has stood out in recent years, providing a new approach to understanding low-carbon lifestyles. The theory's value in policy guidance has also presented itself.

Trigger of changes

The practice theory is a kind of social ontology which caught on in the European social theory community in the 1970s and 1980s. Social thinkers constructed the theory initially to criticize the emerging subject-object dualism in social theories of that time. In the 1990s, scholars began to apply the theory to the field of sustainable consumption, and gradually developed it into a major framework for studying sustainable transformation of everyday life.

A fundamental view of the practice theory is that social actions don't happen alone. They support and involve each other, integrated into an action complex of what we often call daily routines, such as dressing, eating, working, housing, heating, and entertaining. Such ac-

tion complexes are social practices.

For example, the use of water in daily life is never a one-time action. It is embedded in different social practices, like cooking, bathing, and washing. Based on the theory, actions are a manifestation of practice.

The practice theory objects to explaining actions as individuals' choices under the influence of particular discourse, values, and ideas, arguing that the motive of daily actions should be a sophisticated awareness of practice. This is also the crux for the attitude-action framework's lack of explanatory power as proved by empirical research.

When examining sustainable consumption actions through the practice theory, researchers further proposed regarding practice as a trigger of changes in actions. In recent years, more and more studies around the world have started to discuss how to change everyday actions by intervening in practices. Conclusions of these studies show that the seemingly changeless daily life is actually governable. Appropriate institutional interventions in practices, by complying with related rules, will steer everyday life to transition in a socially anticipated direction.

Implications

Inspired by the practice theory, many environmental sociologists called for a practice-oriented governance model to solve environmental issues that are deeply rooted in daily life. It is believed that practice-oriented carbon reduction strategies have broad application prospects in cutting carbon emissions in daily life and mitigating global climate change.

Practice-oriented carbon reduction strategies mean to identify daily practices with high carbon emissions by means of scientific evaluation tools, such as life cycle assessment, and then intervene in these practices to gradually transform them into low-carbon practices through corresponding institutional arrangements. The following three approaches are advisable.

First, it is crucial to reconstruct

factors of existing high-carbon practices. According to the practice theory, practices and the implementation of practices rely on key factors like materials, skills, and significance. Material factors determine the carbon emission attribute of practices. High-carbon practices involve daily activities that consume large quantities of fossil fuel energy or are resource intensive.

Therefore, efforts are needed to reconstruct material factors of high-carbon practices through green, low-carbon technologies, materials, and infrastructure, such as vigorously developing and promoting new-energy automobiles, degradable package materials, and public transport facilities, in order to decarbonize those practices.

Reconstructing skills and significance of high-carbon practices can equally contribute to low-carbon transition. For example, the Japanese government launched a "Cool Biz" campaign in 2005, which promoted a casual dress code that broke away from formal suits and any traditional business symbols, like solemnity and power. Working in casual clothes in summer became a new popular practice among Japanese office workers. Meanwhile, offices were encouraged to set air conditioner temperatures to no less than 28°C. The move was effective in lowering carbon emissions in the season.

Second, attention should be paid to creating favorable conditions for new low-carbon practices. When high-carbon practices are difficult to reconstruct, it is worth considering fostering lower-carbon options to replace high-carbon ones. However, due to path dependence in daily life, the public generally is more attached to existing practices.

To enhance the competitiveness of new practices, multi-pronged measures can be taken, such as improving supporting facilities, providing training opportunities, constructing positive significance of the practices, and offering reasonable subsidies, to incentivize the public to progressively transition to low-carbon practices.

In 2012, the Birmingham City Council joined forces with some non-governmental groups, including Sustrans and Cycling UK, to start off a project dubbed "Bike North Birmingham Community Cycling." Encouraging citizens to drive petrol cars less and ride bikes more, it provided free bike-renting services, opened up riding passages for students and commuters, set up special bike service stations for storage, maintenance, and showering purposes, taught beginners to ride, and trumpeted the positive aspects of cycling, such as convenience, health, and fun. The favorable policy interventions drove more and more citizens to willingly turn to bike riding for short-distance mobility.

Practices are always interconnected and interwoven. Social needs generated out of the practice system seem objective and legitimate, but they can likewise be coordinated. By adjusting the method of interconnection among practices, social needs related to energy consumption, such as mobility and fuel needs, can be reshaped, and the whole practice system can also realize low-carbon transition. Water and soil conservation in Changting, southeast China's Fujian Province, is a good case in point.

Water and soil loss was severe for a long time in Changting due to the failure to strictly enforce bans on entering and deforesting mountainous areas. In need of fuel for daily life, rural households often went to chop wood in the mountain regardless of the bans, so human disturbances in the vegetation of the area were long-standing.

Starting from the 1980s, the local government modified its governance philosophy and shifted the focus of policy interventions to rural households, helping them build wood-saving stoves, gas burners, solar cookers, and methane cookers in the kitchen, and trying to popularize the use of electric cookers, induction cookers, electric kettles, and solar water heaters.

These measures broke the originally heavy reliance on wood collection for daily energy-use practices like cooking and showering. Farmers' fuel demands were diversified and the reliance on forest resources was substantively reduced. In doing so, local forest restoration was accelerated, and opportunities were created for further low-carbon transition.

All in all, it makes sense to innovate daily practices through policy interventions based on a thorough understanding of the rules of practices, thereby attaining the goal of carbon reduction. Such policies not only have little impact on daily life, but will also advance the sustainable transition to low-carbon, green lifestyles.

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