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From Technology to Anti-technology:

How does Technical Governance Transform the Local Cadre Behaviors in China's Rural Anti-poverty?

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Abstracts: This study explores the effect of technical governance on local cadres behaviors in tackling poverty in rural China. It draws upon the data from a single-case study of a rural village in China. Field work finds that the technical governance makes the local cadres or officials go through the motions instead of devotion to duty. I argue that the technical governance transforms the behaviors of local cadres or officials from technology-operation to anti-technology in China's rural anti-poverty mainly because of the conflict between the high frequency of technology application and the limited attention of grassroots cadres and officials. In China, the complexity of poverty makes it difficult to measure the performance of anti-poverty work. With the anti-poverty work as the strictest political task, the local governments under the authoritarian system are forced by strong time constraint to complete the tasks, thus having to use high-frequency technical means to complete the poverty alleviation goal. As a result, the limited attention of grassroots cadres and officials has to be frequently interrupted, thus going through the motions to relieve the pressure. Hence, quantifiable technical governance presents contradiction: the government manufactures biased outcomes precisely when it is looking for unbiased implementation. In the end, the government constructs an image of anti-technology in operating the technology.

Keywords: Technical Governance; Object Complexity; Time Constraint; Attention Interruption; Targeted Poverty Alleviation

1. Introduction

Aneesh Chopra, the White House's chief technology officer, once spoke in a two-day Harvard Kennedy School conference, the rapid growth of technology offers government problem-solvers a new dimension, allowing them to move beyond the traditional tools of growing budgets and proliferating laws to find direct, action-oriented solutions¹. However, the impact of technology on social issues is not universally welcomed as it's too hard in regulation to care about the soft law in the broad spectrum of governing mechanisms, in which instances, governance is a black or white issue where there are either binding, top-down rules or nothing². And some humanists such as Lewis Mumford (1934) and Neil Postman (1992) had once criticized modern technology as a giant machine, and the pursuit of uniform order of technological governance, regarding people as machines, leads to alienation of people³⁴. Then what impact does technology have on government behavior? This article represents a modest response to this challenge. Two related concepts with

different disciplinary origins, **object complexity** and **attention interruption**, applied in an in-depth empirical enquiry better to understand the executive process and consequences of what is newly the world's largest action-based anti-poverty movement: the Targeted Poverty Alleviation Strategy (Jingzhunfupin) in China. Specifically speaking, this article mainly attempts to present how and why the technology application by Chinese government in rural poverty alleviation lead to the consequence of anti-technology application.

In recent years, technological governance has become a hot issue in the philosophy of science and technology. Since the second half of the 19th century, many thinkers are thinking whether science and technology can be applied to social governance and political activities to make society operations more scientific and efficient given the power of science and technology in conquering and transforming nature. This becomes the theme of technocratism that emerged in Europe and the United States at the turn of the 20th century, which believes that science and technology play a decisive role in the development of modern society. However, in the capitalist society, the rise of technocratism has led to various criticisms. Especially since the 1960s and 1970s, the negative effects of science and technology such as energy problems, environmental pollution and nuclear weapons have become increasingly exposed. The trend of anti-scientific thinking in Western society has been rampant, and the crusade against technological governance has become "fashionable". But at the same time, both in developed and developing countries, the scientific practice of political governance advocated by technological governance has been continuously promoted, and it has become the most significant trend in the global sphere of contemporary political activities. So, technological governance cannot completely be excluded from contemporary social governance. In particular, it can be used to deal with many public governance issues directly related to science and technology, such as genetically modified food, nuclear energy, and environmental problems. Moreover, with the rapid advancement of high technology, such problems are increasing in the field of public governance. Therefore, the key to the problem is not simply to reject technological governance, but to build a technological governance model that suits the national conditions. Then, how to shape such a model?

Western critics of technological governance generally have a wrong starting point: equating technological governance with the pursuit of machine-based, grand Utopia social engineering. In fact, according to the actual national conditions, technological governance can be used as a means or tool to select, modify and adjust its implementation model to adapt it to the overall social system and serve the overall goal of society. Specially in China, technological governance has become the basic trend of continuous advancement and deepening of contemporary social governance⁵. Chinese sociologist Qu Jingdong believes that after the new century the technological governance power has replaced the overall dominant power to promote China's social construction with the implementation of administrative system reform⁶. To be more specific, with the continuous introduction of modern information technology, the realization of technological governance, which could be more accurately called technical governance, is more abundant, such as the 12345 mayor

hotline, big data governance promoted by various places and nationwide rural poverty alleviation drive. Then, can technical governance achieve effective governance goals in China? What impact does technical governance have on government behavior? And how it happens? Why have the local cadres behaviors been trapped in formalism or going through the motions ?

2. Literature Review: constructs a analytical framework

2.1 Complexity of poverty: the foundation for the failure of technical governance

American economist William Russell Easterly argues that many technical solutions such as mosquito nets or latrines championed by development experts fail to end poverty because they failed to recognize the importance of the rights of the poor⁷(2014), which indicates the limitation of technical governance in solving social problems, especially in poverty. In terms of poverty, it's a complex social phenomenon without uniform definition and measurement yet as well as remains fundamentally a political concept that is bound up with great deal of complexity, contradiction and contestation (Milbourne,2004)⁸. In terms of the complexity of poverty, Mingione (1996 / 2008) once pointed out: poverty is a difficult question from both a methodological and a theoretical point of view, and the concept is based on the idea that, for various reasons and for variable period of time, a part of the population lacks access to sufficient resources to enable it to survive at a historically or geographically determined minimum standard of life and that this leads to serious consequences in terms of behavior and social relations⁹. Qizilbash Mozaffar (2003)¹⁰ took various accounts of vague concepts to think about the economics of poverty measurement, based on which 'epistemic' and 'fuzzy set theoretic' approaches were used to solve the vagueness of poverty. Afetrwards, David Clark and David Hulme (2009) ¹¹adopted and extended Mozaffar Qizilbas' poverty and vagueness methodology to integrate time into a unified framework for understanding poverty, thus constructing the three meta-dimension including depth, breadth and duration of poverty. Paul Milbourne (2004) goes further to illustrate that Mingione's simplistic definition includes the idea of absolute poverty based around the inability of individuals and groups to secure the basics of life, most notably food ,water, and shelter, but goes much further than this to include relative forms of poverty which are defined in terms other forms of standard of living. What's more, rural poverty may often remain hidden from the gaze of rural residents. Helen Liggett once emphasized the importance of visibility and invisibility within social science which is highly appropriate in relation to poverty research¹² (1991).Or rather, the issue of in/visibility that lies at the heart of academic, policy, media, and lay constructions of poverty. Even worse, in Cal Newport's study, there is measurement black-hole in many administrative affairs because of the complexity or invisibility¹³, which makes it difficult to measure the performance. In terms of the rural China's anti-poverty work, it's also difficult to measure the performance, in

which case it's hard to target the object. These research illustrates that meaning of poverty differ across academic, policy and lay discourses, and are very much context specific—in terms of particular spaces, temporal periods and different regimes of welfare, indicating that it's hard for the policy actors to recognize the poverty clearly and implement the targeted poverty alleviation strictly and standardly .

Heidegger Martin reveals that contemporary man's inveterate drive to master whatever confronts him is plain for all to see. In his perspective, technology treats everything with "objectivity." The modern technologist is regularly expected, and expects himself, to be able to impose order on all data, to "process" every sort of entity, nonhuman and human alike, and to devise solutions for every kind of problem (1977) ¹⁴. "Hard" regulation is one form of technological governance and includes everything from calls to break up large tech firms to efforts to pass a law governing autonomous vehicle, in which instances, governance is a black or white issue where there are either binding, top-down rules or nothing¹⁵. Regulatory techniques refer to the tools and instruments intentionally employed by regulators with the aim of bringing about a desired social outcome, typically by seeking to change the behavior of others. However, this approach ignores the broad spectrum of governing mechanisms, sometimes referred to as "soft law," that exist today. Soft law approaches include multi-stakeholder arrangements, non-binding guidance standards, agency workshops and reports, informal consultants, and third party governance .Specifically towards rural governance on poverty, the regulatory techniques often fails to adapt to the complex rural environment and to meet the complex needs of rural areas, adding that the complexity and vagueness of poverty, which all make the technology achieve little effect.

2.2 Double effects of technical governance on local cadres:

subjective initiatives and objective governance ability

The logic of technical governance goes as follows: the knowledge of society can be obtained by the government via technology and thus social problems are identified and resolutions are found¹⁶. In practice, the regulators or policy makers attempt to take advantage of a serial of tools, instruments and regulations to control the behaviors of the implementers to bring about certain social outcome or policy effects.The possible applications for the technology are numerous, and stand to fundamentally change the way users interact with technology(Moran S. et al,2012)¹⁷. However, alongside these are equally numerous potential undesirable effects and risks.

While **lawyers** tend to focus on the way in which the law can be employed to shape social behaviour, another such technique includes the use of technological design. 'Design-based' regulatory techniques can be understood as the purposeful shaping of the environment and the things and beings within it with the goal of directing designated activities towards articular ends. Legal scholars have explored the way in which design can be employed to shape behaviour. This scholarship has

tended to occur in highly localized contexts: ‘nudge’ techniques aimed at deliberately reconfiguring the social choice context to encourage behaviours deemed desirable have acquired recent prominence; cyberlaw scholars have highlighted how software code is designed to regulate behaviour in cyberspace; and criminologists have demonstrated how ‘situational crime prevention’ techniques can reduce opportunities for criminal wrongdoing¹⁸. While the turn to design has understandable attractions for policy-makers and those with a stake in influencing the behaviour of others, it raises a number of legal and ethical questions that bear upon their legitimacy, including concerns about transparency, accountability and ways in which they might fail to demonstrate respect for persons.

Policy design researchers would care what impact the techniques make on the behaviors of the policy actors. The international workshop 'Rethinking Impact: Understanding the Complexity of Poverty and Change' (Cali, Colombia, 26-28 March 2008) once pointed out: technical capacity entails changing organizational procedures, as well as building individual skills (Lilja and Watts,2010) ¹⁹. Existing research has established that monitoring (data collection/observation) can cause undesirable effects such as changes in user behaviours (S. Dawson, et al.2005)²⁰ and increases in stress (M. Vorvoreanu and C. H. Botan,2000)²¹. Chinese scholar Wang Yulei (2017) revealed the technical mobilization mechanism in China’s Targeted Poverty Alleviation, and found that it can implement the overall goal of political mobilization, but limits the subjective initiative of grassroots executors or local cadres, and easily leads to shape-shifting and resistance²². And Zhang Xianhong (2019) points out that the ideal intention of local government’s technical governance has failed in practice. It shows that the diversion governance mechanism is alienated into the power of line and the redistribution of governance power within the bureaucratic system. The ability of grassroots governance does not rise but fall, and remaining governance of the village presents a state of idling indicators and data²³.It can be illustrated that existing research on technical governance has shown the negative impacts the technical governance made on government behaviors, which mainly focus on the subjective initiative and the objective governance ability. However, more concretely how the technical governance changed the executives’ subjective initiative and the objective governance ability remains to be studied, which leaves room for us to explore it from the perspective of attention forward.

2.3 Cadre attention in authoritarian systems: time constraint, attention interruption and anti-technology

American behavioral economist Sendhil Mullainathan with psychologist Eldar Shafir discuss the role of scarcity in creating, perpetuating, and alleviating poverty in the book *Scarcity: Why Having Too Little Means So Much* published in 2013²⁴.They constructed the scarcity cycle to explain the poverty trap, namely without *slack* the low-income individuals experience *juggling* (the complex mechanism in which individuals patch crises as they arise by constantly shifting their limited resources

according to what is needed most imminently) and juggling further cements low-income individuals' economic status and their place in the cycle. Low-income individuals frequently enter into the scarcity cycle because of poor planning for the future. *Tunneling* and *decreased bandwidth* causes individuals to focus on *urgent tasks*, needing *attention* with a time constraint, rather than important tasks, needing attention but without a time constraint. Urgent tasks cause many to use quick fixes, like loans, which have significant consequences. Without planning, and only addressing urgent tasks, low income individuals are ill-equipped to handle shocks, extreme events that require more slack than available and enter the scarcity cycle²⁵. Instead of focusing on the poor, their research inspires us to care about the anti-poverty policy actors whose attention are constantly interrupted by the higher class or inspectors under the high time constraint caused by high political pressure.

Firstly, the authoritarian system can give powerful political pressure to policy tasks, and then generate strong time constraint through technological governance. Pierre Landry built a decentralized authoritarianism to describe China's national system under reform. He believes that China is a highly decentralized country in the world from a financial perspective, but the CCP maintains its position through a centralized cadre appointment system, system reform, reunification of political decrees, etc.²⁶. Philip C. C. Huang analyzes the state governance in the reform from the perspective of practice history, and believes that the expression of central government deviates from practice, which further leads to the phenomenon of "inferior countermeasures against superior policies" prevalent in local governments²⁷. Zhou Xueguang analyzed the contradictory relationship between the existing system and governance efficiency from the perspective of contemporary state governance, and defined this contradiction as "hierarchical system" and "unification concept", and considered that this is the fundamental and institutional contradictions of internal conflicts between current "authoritative system" and "effective governance"²⁸. Rong Jingben discovered the basic model of bureaucratic system under the authority system—the pressure system²⁹, which uses political pressure to focus the attention of officials on the work of the administrative center, and carries out technological governance with economic rewards and punishments to ensure the implementation.

Secondly, under time constraint the attention of policy actors will be all limited to certain technical indicators and suffers constant interruption from the government units from upper levels. Attention interruption itself is very short-lived, but the effect will last for a long time. After the interruption, it takes a long time to return or re-concentrate³⁰. But under the time constraint, the policy actors have to pretend to be busy in working very urgently with low efficiency, during which the rhythm of work and behavior order are all broken. This seemingly busy work style has caused grassroots cadres to fall into constant attention interruption and decay, thus failing to complete tasks that require long-term follow-up. Instead, they are caught in temporary assistance such as superficial emergency or falsification. Therefore, with the lapse of time, interrupted constantly by the superior government units or inspectors, the policy actors **go through the motions** instead of devotion to duty to avoid the accountability,

which is the manifestation of **anti-technology**.

3. Methodology: Research Design ,Method and Case

Research design is of great importance to any piece of research. Indeed, the strategy that a researcher chooses to address the research objectives and examine a specific topic can influence the quality of the results. In order to give an explanatory answer in this research, case study was selected because it is an inclusive approach, allowing for triangulation of data from multiple collection techniques into a single study (Yin, 2017)³¹. Yin also points out: there is no fixed formula for choosing the research method, which depends largely on the research problem ((Yin, 2017).

Driven by the research question, this paper adopted the single case study method for three reasons. First, it seeks to illustrate a nuanced, thick, context-specific, and holistic social account of the technical governance process and effects on local cadres in rural China. Second, a single case study can help deepen our understanding of the complexity of poverty as well as the measurement black-hole of anti-poverty work by showing the entire implementing process. Finally, by analyzing a single case, it's possible to discover the attention interruption mechanism under authoritarian systems, so as to expand the research horizon of government behavior or social governance.

The case was adopted for this study based on the following three criteria. First, it is located the western poverty-stricken rural area in China, which shares all basic characteristics of targeted poverty alleviation. The Outline of China's Rural Poverty Alleviation and Development (2011-2020) (referred to as the "Poverty Alleviation and Development Program") identified 14 concentrated contiguous areas of extreme poverty in China as the main battlefield for a new round of poverty alleviation. This case is among them, and it is confronted super high political pressure from superior government, which provides a proper study site for this research. Second, this case involves a serial of technical means, including information technology such as big data platform for poverty alleviation, a poverty alleviation statistical smartphone app, Wechat, and instant messaging software, QQ, and statistical instruments such as poverty household information statistical table and target decomposition of poverty alleviation tasks. The manifestations of technology adoption are easy to be observed, and it is also possible to participate in the process to discover the inner mechanism underpinning the policy actors' behaviors change. Third, this case is convenient for us to approach because previously we have got known the local cadres who promise to offer us help in our fieldwork. With the help of the acquaintances in the town and village, our fieldwork went on smoothly and effectively.

The fieldwork for this study was undertaken in a town and a village in Chinese Liuzhi Special District of Liupanshui city during the period of April to June of 2018. It sought to understand how the technology adoption in poverty alleviation influences the government behaviors and the inner behavior mechanism in the process. Saunders et al.(2009) ³²suggest the use of two or more independent sources of data or data-collection methods within one study is useful to ensure that the data could produce a more complete, holistic and contextual portrait of the situation. Hence, in this study the researcher use interviews, documentary evidence and observation

narrative as data sources. Thus, in-depth interviews and semi-structured interviews were adopted as the two main approaches, which were complemented by some non-participants observation and also by the use of documents provided by the town government and village committee.

4. Findings: Object Complexity, Time Constraint and Attention interruption

Since 2013, China's rural poverty alleviation has gradually promoted from a government-specific business to a national strategy, and thus continuously strengthened its political position and became an important mission of the Communist Party of China, thus laying a large-scale poverty alleviation pattern³³. Under this pattern, China's party and government leaders at all levels have to focus on poverty alleviation, namely "five-level secretaries working hard to fight poverty". Our fieldwork has been carried out under this circumstance.

As the interviewees narrated their poverty alleviation experiences, three themes emerged that illustrate the objective basis, system condition and immanent mechanism of technical governance.

4.1 Object Complexity : it's hard to measure the anti-poverty performance

As the poverty is complex, invisible and vague, the government devotes a lot of time and energy to identify the eligible poor household to offer help. After that, the main policy actors, such the posting first secretary (Diyishuji), village cadres and other government officers, will be responsible for the poverty alleviation tasks of those identified households. **During their work in poverty alleviation, their performance will be measured regularly, inspected randomly and even picketed from time to time.** Then, confusions and conflicts arise.

The confusions concentrate on the cognition and dynamics of poverty, because there are different discourses on both points among the policy maker, the policy actors and the policy objects (mainly the poor people). Just as the local cadres and the poor said:

We don't know what exact poverty is, such as lack of money, family illness, low income, broken house, difficulty in survival, etc., but this is not what many people in the village think. Moreover, as a help cadre, we do not have a unified statement about poverty. Generally speaking, we rely on documents and then combine experiences and feelings to do the work. So, as to targeted poverty alleviation, we can just do as the government documents tell; and then the problem is that the documents are mainly about some technical regulations which can't deal with the complex circumstances we face in reality. (posting first secretary in the village, SX)

The conflicts are mainly between the assessment of the anti-poverty performance and the measurement means. On one hand, the government applies lots of information technologies to facilitate the implementation of the anti-poverty work. For example, use big data platform to collect the information of the poverty eradication progress, using punch software to monitor the working status of the policy

actors and using Wechat groups to communicate working experiences. On the other hand, the actual poverty reduction effects are measured by many statistical data and supporting materials based on those technologies. With time goes on, the requirements on those statistical data and supporting materials get stricter and more urgent, the policy actors have no choice but to work hard on the data and materials instead of caring about the poverty eradication progress. Just as another posting cadre said:

These statistical data and supporting materials are intended to help with the work, especially do good to be aware of the poverty dynamics. But it's strange that instead of doing good they make our work ineffective and disorganized. As for the reason, mainly one is because the higher government forces us too urgent, and two is that they can't actually reflect the real results of poverty alleviation. (Posting Cadres, LX)

4.2 Time Constraint: everything is urgent to make nothing important

Under the authoritarian system, when the poverty alleviation work has been taken as the core aim of the government, there will be very high political pressure faced by the policy actors. And the political pressure will be transformed into time constraint, specifically manifests as the urgent plan and frequent inspection as well as strict accountability. As the pressure grows and continues, the work about poverty will be taken as the most urgent things for the policy actors needing to be done preferentially. On the condition that the poverty and anti-poverty are both complex, the situation will be deteriorated because the policy actors will lose the ability to prioritize, thus trapped in the disorganization. Just as the first secretary said:

Now the poverty alleviation work has been taken as a battle, so you can imagine the time pressure under this situation. Everything, once related with the poverty or poor households, it will be regulated under one-vote-veto and must be finished in time without any delay. So everything is urgent to make nothing important. It seems that relying on these materials will lift the poor out of poverty. (posting first secretary in the village, SX)

After a long time, almost few people will pay attention to the actual progress of poverty alleviation projects or the real demands of the poor people. Because all the policy actors face the timely data or materials, and sometimes we will be trained to perfect the materials to get through. (deputy town chief, YZ)

When the anti-poverty work faces the frequent inspections or assessments from the higher checking groups, the situation will transform into a new stage, and then the attention interruption will emerge.

4.3 Attention Interruption :decrease the subjective initiative and objective governance ability thus causing going through the motions

For the whole nation, poverty alleviation is not only a national strategy, but also an important mission of the CCP. For the public sector, such as party, government,

state enterprises and institutions at all level, poverty alleviation has gradually evolved from a routine government business into an extraordinary political task. The direct consequence of this is that a poor village or a poor township will be faced with unprecedented assistance or intervention from the above five levels of public sector. Objectively speaking, this pattern has not only brought unprecedented resources, information and attention to rural poverty alleviation, but also brought unprecedented political pressure, administrative tasks and accountability requirements to grassroots units. **When the above five public sectors need to rely on grassroots organizations to complete the poverty alleviation tasks, the attention of the rural two-level cadres becomes the fighting target ,thus bringing about constant attention interruption.** Coupled with the poverty alleviation tasks and various policies, supervision and assessment, investigations and surveys etc., the complex attention interruption mechanism formed. Just as the cadres said:

Let's see, one upper unit comes to our village for inspection or investigation, we will have to stop our work at hand to receive and prepare the materials. If two units come in one day, what will happen? How about three? In my expression, at most five different units come in one day. And almost all kinds of inspections, check, investigation or other visit add to about 25 times a month. Then, all of us grassroots cadres are in interruption and our work is trapped in constant interference. (posting first secretary in the village, SX)

Under the frequent attention interruption, the subjective initiative and objective governance ability have both been limited. On one hand, their subjective initiative is largely confined to the technical regulations, especially by the punk software and complex tables. As the tables contain lots of small details, it's very easy to check some small mistakes. In addition, the inspection standards of various departments are inconsistent, this just leaves the policy actors confused , because there are all kinds of problems, big and small. On the other hand, this transforms the attention of the policy actors from the actual poverty alleviation work to the inspection, making them care little about the true demands of the poor and go through the motions. At last, the local cadres almost all show anti-technology attitude to the technical governance.

5. Conclusion

The technical governance makes the local cadres go through motions, transforming the behaviors of local cadres or officials from technology-operation to anti-technology in China's Rural Anti-poverty mainly because of the conflict between the high frequency of technology application and the limited attention of grassroots cadres and officials. Specifically speaking, the object complexity making it hard to measure the anti-poverty performance is the objective foundation of the consequence; and in China, with the anti-poverty work as the strictest political task, the local governments under the Political Pressure System are forced by strong time constraint to complete the task, thus making the local cadres trapped in disorder. Then, facing with constant inspections or checks, their attentions are interrupted often, in which

case their subjective initiative and objective governance abilities are both interfered. They have to use high-frequency technical means such as materials or tables to cope with the inspection, thus going through the motions to relieve the pressure. Hence, quantifiable technical governance presents contradiction: the government manufactures biased outcomes precisely when it is looking for unbiased implementation. In the end, the government constructs an image of anti-technology in operating the technology.

In China's targeted poverty alleviation drive, party and government departments at all levels have undertaken poverty alleviation tasks. In order to take their poverty alleviation responsibilities, they need to visit, guide or inspect the poor villages constantly. When all levels of departments do this, they will interfere with the progress of poverty alleviation in the village cadres, causing attention interruption. Attention interruption limits both subjective initiative and objective governance ability in the face of complex poverty problems. The application of technology to the anti-technology is the wrong result of grassroots cadres who attribute their "high pay and inefficiency" situation to technical governance. In fact, it is the double result of technological governance dealing with complex social problems and the distortion of institutional pressure.

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References

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- ¹ Technology in governance
<https://news.harvard.edu/gazette/story/2010/09/technology-in-governance/>
- ² Adam Thierer . Technological “Governance” Requires a Balanced Approach.
<https://www.mercatus.org/bridge/commentary/technological-governance-requires-balanced-approach>
- ³ Mumford, L. (1934). *Technics and Civilisation* Harcourt. Brace and World, New York.
- ⁴ Neil, P. (1992). *Technopoly: the surrender of culture to technology*.
- ⁵ Liu Yongmou.(2018).Philosophical Reflection on Technology Governance. *Jianghai Academic Journal*.(4):46-52 (In Chinese)
- ⁶ Qu Jingdong,Zhou Feizhou and Ying Xing.(2009).From Macromanagement to Micromanagement—Reflections on Thirty Years of Reform from the Sociological Perspective. *Social Sciences in China*.(6): 104-127 (In Chinese)
- ⁷ Easterly, W. (2014). *The tyranny of experts: Economists, dictators, and the forgotten rights of the poor*. Basic Books.
- ⁸ Milbourne, P. (2004). *Rural poverty: marginalisation and exclusion in Britain and the United States*. Routledge.
- ⁹ Mingione, E. (Ed.). (2008). *Urban poverty and the underclass: a reader*. John Wiley & Sons.
- ¹⁰ Qizilbash, & Mozaffar. (2003). Vague language and precise measurement: the case of poverty. *Journal of Economic Methodology*, 10(1), 41-58.
- ¹¹ Clark, D. , & Hulme, D. . (2010). Poverty, time and vagueness: integrating the core poverty and chronic poverty frameworks. *Cambridge Journal of Economics*, 34(2), 347-366.
- ¹² Liggett, H. (1991). Where they don't have to take you in: The representation of homelessness in public policy. *Journal of Planning Education and Research*, 10(3), 201-208.
- ¹³ Newport, C. (2016). *Deep work: Rules for focused success in a distracted world*. Hachette UK.
- ¹⁴ Heidegger, M. (1977). *The question concerning technology, and other essays*.
- ¹⁵ Adam Thierer.(2019). Technological “Governance” Requires a Balanced Approach.
<https://www.mercatus.org/bridge/commentary/technological-governance-requires-balanced-approach>
- ¹⁶ Yaping Peng.(2018). The Pradox of Technical Governance: A Public Opinion Survey’s Political Process and Its Results, *Chinese Journal of Sociology* Vol.38.No.3, 47-78.
- ¹⁷ Moran, S., de Vallejo, I. L., Nakata, K., Conroy-Dalton, R., Luck, R., McLennan, P., & Hailes, S. (2012, March). Studying the impact of ubiquitous monitoring technology on office worker behaviours: The value of sharing research data. In *2012 IEEE International Conference on Pervasive Computing and Communications Workshops* (pp. 902-907). IEEE.
- ¹⁸ Reference: <https://www.kcl.ac.uk/law/research/centres/telos/archived/research-themes/tech-gov>
- ¹⁹ Nina Lilja and Jamie Watts.(2010). Development in Practice, Vol. 20, No. 8, Rethinking impact: understanding the complexity of poverty and change (November 2010), pp. 917-932
- ²⁰ S. Dawson, et al., "Watching Learning From Behind Closed Doors: The Impact of Surveillance on Student Online Behaviour," presented at the ELearn 2005: World conference on E-learning in corporate, government, healthcare and higher education, Vancouver, Canada,2005.
- ²¹ M. Vorvoreanu and C. H. Botan, "Examining Electronic Surveillance In The Workplace: A Review Of Theoretical Perspectives And Research Findings," presented at the the Conference of the International Communication Association, Acapulco, Mexico, 2000.
- ²² Wang Yulei.(2017).The Technical Mobilization in the Rural Targeted Poverty Alleviation. *Chinese Public Administration*.380(2):56-60 (In Chinese)
- ²³ Zhang Xianhong. (2019). Paradox and myth of technology governance and governance technology. *Zhejiang Academic Journal*. (1):160-165 (In Chinese)
- ²⁴ Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much*. Macmillan.
- ²⁵ Wikipedia,https://en.wikipedia.org/wiki/Scarcity:_Why_Having_Too_Little_Means_So_Much
- ²⁶ Landry PF. Decentralized Authoritarianism in China: the Communist Party's control of local

elites in the post-Mao era: Cambridge University Press New York; 2008.

²⁷ Philip C. C. Huang. (2009). Crossing left and right divisions: exploring reform from the perspective of history-of-practice. *Open Times* .(12):78-88 (In Chinese)

²⁸ Zhou Xueguang. (2011). Authoritative system and effective governance: the institutional logic of contemporary China's national governance. *Open Times* . (10):67-85. (In Chinese)

²⁹ Rong Jingben etc.(1998). The transition from a pressure-based system to a democratic cooperation system: the political system reform at the county and township levels. Beijing: Central Compilation&Translation Press (In Chinese)

³⁰ Mullainathan, S., & Shafir, E. (2013). Scarcity: Why having too little means so much. Macmillan.

³¹ Yin R K. Case study research and applications: Design and methods[M]. Sage publications, 2017. P4 & P11

³² Saunders, M., Lewis, P. & Thornhill, A. 2009, Research methods for business students, Fifth Edition, Pearson Education Limited, Essex, England.

³³ Wu Gaohui . Dual Dissimilation: Multi-case Analysis of the Paradox of Formalism of Targeted Poverty Alleviation in China, *Journal of Gansu Administration Institute*, No.2, 2019 (Serial No. 132) 20, Apr. 2019 (In Chinese)