



GOVERNING SCIENTIFIC ACCOUNTABILITY IN CHINA

Project Report

Written by Dr Joy Y Zhang



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The views expressed in this report are those of the author and not necessarily those of the individuals and institutions listed here.

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CHINA'S SCIENTIFIC ACCOUNTABILITY AND ITS GLOBAL IMPORTANCE

China's rise as a 'leading influence' in the organisation and delivery of scientific innovation is Janus-faced (FCO and BIS, 2013). On the one hand, China presents new opportunities of maximising the uptake and application of science in a climate of sluggish economic growth. China is the second largest investor in science and technology in the world. Today about 10% of the world's English language journal articles come out of China. In the past decade, the citation rate for Chinese papers on science and technology has increased by 30% a year on average. In fact, over the last decade the UK has developed more scientific collaboration with China than any other European country, particularly in areas of common interest, such as sustainable agriculture and biomedicine (BEIS, 2017).

On the other hand, a persistent deficiency in ensuring responsible research conduct casts a shadow on the public attitude towards research carried out in, and with, China. In the last two decades, China has experienced a 'legislative boom' of importing Western regulatory norms and bioethical standards to help justify life science research and enable international collaboration. Yet its public engagement programme is still at a nascent stage. A deficiency in translating regulatory commitments into action and 'making the rules work' remains a key problem. Cases such as locally authorised stem cell therapy and unsupervised genetically modified (GM) crop trials not only hurt China's efforts to become a 'trusted player in the competitive and skeptical global community of life scientists' but has also jeopardised the global image of the field.

This research project led by Dr Joy Zhang aimed to promote good practice and accountability governance in China's life sciences, through a comparative study of stem cell and GM food governance. Between 2014 to 2017, 59 semi-structured interviews and 12 focus groups were conducted with Chinese policy-makers, ethicists, scientists and civil society actors in three Chinese cities: Beijing, Wuhan and Xi'an. These three cities were chosen for they are all important regional research hubs and provide complimentary insights on how scientific dialogues are organised in different socio-economic contexts. As the national capital, Beijing is a well-resourced and highly globalised north-eastern city. Wuhan is the moderately well-off southern provincial capital of Hubei and is a main hub for agroindustry research. Xi'an is the capital of the north-western Shaanxi province, which is less innovation-driven and financially less advantaged than Beijing or Wuhan. Fieldwork data suggested that a 'post-hoc pragmatic' regulatory mentality has largely contributed to a mis-match between China's scientific ambition and its reception. In addition, an over-politicisation of science and science communication in China has resulted in a 'credibility paradox' which inversely curtailed public trust in formal channels of science communication.

To mitigate the consequences of current governance rationales, this project held China's first multi-stakeholder training workshop on science communication in Wuhan, 2017; developed a pilot 7 lectures of the Educational Module Resource (EMR) on the public engagement of science for key Chinese institutions; and, submitted an 'internal policy memo (*neican*)' to the Chinese government. The project's Wuhan workshop initiated the founding of a multi-stakeholder UK-China Consortium on Scientific Risk and Public Engagement to sustain knowledge exchange on good governance and on the co-production of alternative ways to address public accountability in the life sciences.



KEY FINDINGS

Finding 1: 'Post-hoc pragmatism' and a dual 'lost-in-translation'

Interviews with key Chinese scientists, policy makers and interest groups in biomedical and environmental sciences identified that the field of life sciences in China is confronting two interrelated 'lost-in-translations'. One is the failed translation of its huge investment into quality application of its key research programmes, such as the delivery of marketable stem cell-based products and genetically modified foods. The other is the failed translation of a permissive policy stance into a supportive research environment.

This was due to what Dr Zhang characterised as a 'post-hoc pragmatic' regulatory ethos that remained dominant in China's governance of science in the past 15 years. This is to say, most of China's policies on the life sciences were not founded on systematic engagement with the wider social debates, but were introduced through a sequence of a 'pragmatic' patch-up of regulatory oversights as political responses to specific domestic or international public outcry. Additionally, China has historically governed the life sciences with 'soft centralisation' policies. Such policies include controlling research by restricting access to national funding and having multiple overlapping authorities that issue approvals. As the sources of research findings diversifies, such policies are growing less effective, weakening China's ability to regulate clinical stem cell research as well as genetically modified crops throughout the country.

This research project identified that *post-hoc* pragmatic policies have been particularly disruptive to the development of life sciences and largely contributed to China's poor reputation as a country lacking oversight. Effective governance of science will require China to address issues of accountability, jurisdiction, and enforcement of current policies. Governing bodies must engage with researchers, clinics, patients, businesses and others to develop policies that take into account their needs and interests. More transparent and inclusive frameworks will be essential for China to develop its ability to pre-empt or address public skepticism and ethical concerns.

Related project outputs:

Zhang, J Y (2017) 'Lost in Translation? Accountability and Governance of Clinical Stem Cell Research in China'. *Regenerative Medicine*. DOI:10.2217/rme-2017-0035.

Zhang, J Y (2017) *The Problem with 'Problem Solving': Pragmatism in China's Ethical Governance of the Life Sciences*. A set of working papers with a focus on biomedicine, bioscience and bioengineering. Delivered at Peking University Health Science Centre, Chinese Academy of Sciences. and Zhejiang University in September 2017.



KEY FINDINGS (CONT)

Finding 2: The ‘credibility paradox’ and the need for culture change

While Chinese science is racing ahead with generous investment on cutting-edge projects, its science communication is often characterised as lagging behind with a twentieth-century top-down model, with seemingly unenthusiastic scientists (Hu, 2010; Wu and Qui, 2012). In recent years, however, there has been a shift in Chinese scientists’ attitudes towards public engagement. Almost all of the scientists this project interviewed explicitly acknowledged public communication as part of their social responsibilities and were willing to take part.

This new perception is partly a response to domestic concerns. For example, in 2008, the Chinese government initiated a 12-year plan to promote GM technology with a generous 25 billion RMB (US\$3.6 billion) investment. But in the following years, public concerns over food safety have markedly curtailed scientists’ original ambitions. Despite strong government endorsement, public acceptance of GM products remains low (Qiu, 2014). The global reach of research is another reason for Chinese scientists’ renewed incentive to enhance transparency and public accountability of their work. The pressure to collaborate with international peers has made Chinese investigators more mindful of the societal perceptions of their research, which can have implications for future collaborations and funding opportunities.

However, one key, yet seemingly perplexing finding was a ‘credibility paradox’ in Chinese scientists’ narrative of how effective public communication can be achieved. This is to say, the majority of them expressed scepticism, reluctance and even resistance towards participating in formal channels of science communication, such as responding to public queries through online or paper media. Rather, many scientists were more keen to act as ‘informal risk communicators’ on private occasions or grassroots events. This is because they believed speaking as an ‘institutional scientist’ would invite additional public scepticism and contention. An absence of visible institutional and official endorsements, conversely, would render them with more public credibility and lead to better conversations. This shared preference of being perceived as ‘unofficial carriers’ of information reveals the culturally and politically embedded power dynamics that conditions effective communication. There are at least two useful insights that can be drawn.

First, Chinese scientists’ actions in and perceptions of science communication suggests that even in authoritarian societies, ‘civic’ epistemology plays a tacit yet significant role in validating scientific knowledge. This is to say, without justifying and adapting its value-orientation according to wider cultural and social expectations, political directives alone fall short in mitigating a multiplicity of public interpretations and cannot guarantee public uptake of a given scientific agenda (Jasanoff, 2005). Scientists’ reorientation of their position as informal risk communicators, despite financial and administrative monopoly by the government, is an involuntary restoration of a *public* reasoning of science (Wynne, 1980).

Second, China may represent an extreme case of asymmetrical power-relations between the state, scientific community and society. However, China is hardly unique in having the national government as the dominant and most powerful apparatus to direct public opinion and shape the conditions in which societies embrace or reject a new technology (Bell and Hindmoor, 2009: 77–78, 86; Leong et al., 2011). It is not the presence of government *per se*, but an over-politicisation of science that alienated the public (and the scientists) and paralysed effective communication in China. Thus, the credibility paradox urges a culture change among Chinese scientific institutions in conceptualising the relation between science and politics, which conditions the delivery and reception of scientific research. To promote a social uptake of emerging science, attentiveness to culturally entrenched knowledge-ways is crucial, but what is equally important is that it involves an intricate balancing act to maintain a level of reciprocity between a politicisation of science and a scientification of politics. For China to establish public engagement that matches its scientific ambition, coordinated culture change within institutions and capacity building of scientific practitioners are needed.

Related project outputs:

Zhang, J Y (2015) ‘The “Credibility Paradox” in China’s Science Communication: Views from Scientific Practitioners’, *Public Understanding of Science*, 24(8), 913-927.

Zhang, J Y (2016) ‘Public engagement: The next area of expansion in science’, *People’s Daily (Overseas Edition)* (In Chinese), page 6, 19 December

Zhang, J Y (2017) ‘Transparency Is a Growth Industry’, *Nature*, 545, S65.

Zhang, W, Zhang, J Y and Liao, M (2017) ‘Global leadership in science and China’s engagement with public opinions’ (in Chinese), Internal Policy Memo submitted to and reviewed by CASTED, Ministry of Science and Technology in November 2017.

Finding 3: Nesting a 'rhizomic' spread of new practices

How to encourage socially-responsible cutting-edge research amid embedded scientific uncertainties and conflicting views is a conundrum that confronts regulators around the world. But it may be especially pertinent to China, a new rising power in global science with diverse domestic needs. For example, food safety is an issue for everyone, but it is not the same issue for everyone. The public may not be responsive to the *immediacy* of every danger and security concern, but it is often the technological implications that speak to the *intimacy* of possible risks experienced at the personal level that captures the public's attention.

This project closely followed a number of successful non-governmental initiatives in encouraging critical discussions of industrial application of science and in repairing public trust. One insightful finding was how civil actors (including scientists working as 'informal risk communicators') orient themselves and their public engagement efforts with that of wider global and national communities. This is most evident in the nation-wide 'Good Food Movement' (Zhang, 2018), in which many grassroots organisations strive to restore public confidence in the food system. Whereas civil societies are well networked among the three cities studied in this project, they are also keen to protect locally-adapted heterogeneity in engaging with their respective publics. While notable international and national experiences served as an important resource of ideas, they were seen by Chinese civil actors more as a 'point of reference' rather than a model practice *per se*. Furthermore, Chinese activists interviewed were equally skeptical of an uncritical transplant of their successful practice to another Chinese city. In the eyes of interviewees, effective restoration of trust relations in China often rely on particular campaign adeptness at taking part in and benefiting from a 'rhizomic' spread of inspirations across geographic borders. That is, burgeoning new practices can be instigated by seed ideas afar but should be deeply rooted in the local context. But a 'rhizomic' spread of good practices entails more than just a 'tailored' programme. For sustained trust relation to take place, public engagement of science necessitates the introduction and nesting of rules and norms at different levels in the local context.

This finding sheds light on what transnational dialogue and the social studies of science and science policies can do to help locate possible pathways of public engagement which are pertinent to Chinese particularities. As the next section specifies, to translate research findings into operational working methods to improve the public accountability of China's science, this project organised a UK-China multi-stakeholder public engagement workshop in Wuhan, developed a pilot 7-lecture EMR for Chinese universities, and submitted six specific policy recommendations to the Ministry of Science and Technology. The point was not to promote a singular engagement strategy or a particular set of curriculum, but to establish a dedicated experience sharing platform between Chinese practitioners and UK peers so as spark new ideas, and to embark on a joint-exploration on how curriculum change may best prepare a new generation of Chinese scientists for their social responsibilities. At the same time, institutional adaptations from the top-down are also necessary to facilitate nesting new practices.

Related project outputs:

Zhang, J Y (2017) 'How to be modern? The social negotiation of "good food" in contemporary China'. *Sociology*, DOI: 10.1177/0038038517737475.

Zhang, J Y and Liao, M (2017) Educational Module Resource for Chinese Scientific Practitioners (in Chinese). Online access: www.kent.ac.uk/gsa/emr

Zhang, J Y (2018) 'Cosmopolitan risk community in a bowl: A case study of China's Good Food Movement', *Journal of Risk Research*, DOI: 10.1080/13669877.2017.1351473

Zhang, J Y and Barr, M. Understanding the transformative power of commoning and alternative food networks. Under review.

KEY DELIVERABLES

'Scientific Risk and Public Communication' training workshop in Wuhan

The nascent state of science communication in China can also be seen from official government documents which lack the vocabulary to describe various interactions between science and the public. Currently, the term '*kexue puji*', or *kepu* for short, is used as a catch-all terminology to incorporate a range of science communication activities (MOST, 2012; State Council, 2006). Literally translated as 'science popularisation', *kepu* incorporates a spectrum of activities, ranging from one-way science education to interactive public dialogue, from one-off media events to sustained community engagements.

In March 2017, this project pioneered the public engagement of science in China by organising China's first multi-stakeholder public engagement training workshop at Huazhong University of Science and Technology. It brought together 60 delegates (ie policy makers, leading scientists, bioethicists, sociologists, public engagement experts, journalists and relevant civil society staff) from both China and the UK to discuss both the failures and successes of existing public engagement avenues. This workshop led to the founding of a multi-stakeholder UK-China Consortium on Scientific Risk and Public Engagement, which advised on the research and development of an Educational Module Resource (EMR) on public engagement.

Workshop participant feedback lauded the EMR as an 'eye-opener' to help improve the social understanding of their research practice. China's official science newspaper, *Science and Technology Daily*, cited Dr Zhang's vision of China's public engagement of science at length and echoed her view that promoting a state-society collaboration in the building of risk communication and a risk responsive system is crucial for China's global research competitiveness (Liu, 2007).

Educational Module Resource (EMR) on the public engagement of science

To systematically introduce the concept and practice of the public engagement of science to Chinese universities, in the summer of 2017, Dr Miao Liao (CATSED, Ministry of Science in China) and Dr Joy Zhang together developed a Educational Module Resource (EMR) on the public engagement of science for Chinese institutions. Launched in October 2017, this set of 7 lectures (equivalent to 10-12 hours of teaching material) combined both international experience and Chinese case studies to support scientific practitioners and educators learning about engagement-related skills and existing avenues.

There are two versions of the EMR. The Student Version provides core material for self-learning, while the Teacher's Version provides more detailed annotation and delivery instructions to facilitate flexible adaptation to existing modules. The Student Version is made publicly available on the project's website: www.kent.ac.uk/gsa/emr. Primary users of the EMR include 1) Chinese research institutions/training programmes and lecturers as teaching materials, 2) post-graduate students and early career researchers/postdocs in the sciences as self-studying resources, and 3) research institutions/university press offices as capacity building resources.

Since its launch, Professor Lu Gao (Chinese Academy of Science) and Dr Miao Liao have successfully helped the assimilation of the EMR to existing curriculums in research groups within the Chinese Academy of Sciences and a number of universities (eg Peking University, Tsinghua University, Beijing Institute of Technology, Beijing University of Chemical Technology, and Yantai University in Shandong).



The weight of this pilot exercise is not limited to immediate curriculum adaptation in leading Chinese universities in research intensive regions. For public engagement education to be effective, curriculum change necessarily needs to evolve with public debates and to speak to local contexts. Thus, having top ranked National and Provincial Key institutions and the Chinese Academy of Sciences to first adopt public engagement training into their curriculum has significant showcase effects, which can inspire and incentivise other Chinese institutions to further develop and assimilate public engagement into the training routine of young scientists.

Policy recommendations to China's scientific governance

Public engagement takes time and it does not come naturally to everyone. Structural support and institutional incentives that recognises and values the time and effort scientists put into public dialogue are highly important for sustained and meaningful public dialogues on science.

To this end, policy recommendations on improving the public accountability of science co-authored by Professor Wenxia Zhang, Dr Joy Zhang and Dr Miao Liao, were submitted to China's Ministry of Science and Technology in November 2017. More specifically, based on the findings of this project, six action points were proposed: 1) to systematically upgrade China's 'popularisation of science (*kepu*)' programmes with more public dialogues, 2) to build public engagement training into the curriculum of university scientific majors, 3) to incentivise the inclusion of public engagement plans in research grants application and grant managements, 4) to improve the collection of public opinion, 5) to enhance interdisciplinary and international collaborations on responding to public concerns, 6) to strength participation in global ethical debates on science and technology.

This policy submission was favourably reviewed. For recommendations #2 and #5, a successful pilot run of the EMR in leading Chinese universities and the founding of a multi-stakeholder UK-China Consortium on Scientific Risk and Public Engagement demonstrated the practicality and efficacy of these recommendations.



WHAT CHINESE SCIENTIFIC ACCOUNTABILITY ‘WILL HAVE BEEN’

To paraphrase Chinese feminist, Tani Barlow (2004), the value of framing China’s scientific governance in the future anterior and of thinking in terms of what Chinese scientific accountability science ‘will have been’, is that it underlines how an anticipated future is embedded in the present moment (and how a moment was a present in the past).

When one thinks of ‘safeguarding’ the population from potential risks in China, the first cultural symbol that comes to mind is perhaps the Great Wall. Thus when we designed the project logo, we inserted a winding Great Wall to represent the letter G in ‘governing’.

So what would the equivalent of a ‘Great Wall’ in scientific governance look like? Surely we can no longer ‘wall off’ risks associated emerging science: How can one obstruct something that often cannot be seen, or touched or is not yet known to us? If we are allowed to borrow from the old Chinese saying, ‘collective will forms the bulwark’, then perhaps we could argue that the best defence against undesirable consequences of modern development is a collective commitment to identify what types of technologies we want and under what conditions. But answers to these questions may not always be self-evident, or singular, and sometimes it may even strike us that what we once sought for is not what it seems.

This is where listening to different voices and engaging with others’ views may be beneficial. Public engagement does not come ‘naturally’ to scientists in any country. In the UK for example, public engagement was only recognised as an institutional priority since 2000, when the House of Lords’ *Science and Society* report reflected on the critical state of public confidence in science after the BSE crisis. It took a ‘culture change’ among UK institutions to embed a supportive infrastructure that recognises and values the time and effort scientists put into public dialogue (NCCPE, 2008).

For China to establish a public engagement that matches its scientific ambition, a similarly coordinated structural and culture change may also be needed. Capacity building for a new generation of scientific practitioners and to re-anchor the state’s role are necessary first steps.

Through an Euro-centric lens, China may first appear to be a special case for it is a country that is struggling with the twin process of globalisation *and* modernisation. Yet if by modernity, we refer to the emergence of new collective imaginaries, which are associated with technological development and form the basis for new forms of collective actions in the search of the good life, then which society is *not* caught between the dual pressure of advancing responsibly and competitively?

In this sense, China’s experience may also be instructive to the world. This may be especially true not only because China is projected to overtake the US both as the world’s largest investor and as the largest publisher of science in the next decade, but also because China’s natural science research is increasingly spanning across national borders (Nature Index China, 2017). To inspect what Chinese scientific accountability will have been is to understand what conditions science-society relations and what constitutes effective responsibility in the rise of new social networks. To partake in China’s search for answers to these questions may be a rewarding process, for the journey itself may enlighten us on who we are as societies and what scientific commons means in an increasingly connected but pluralistic world.



Appendix 1

Scientific Risk and Public Communication Workshop Programme

25-26 March (Saturday-Sunday), 2017

Venue: International Academic Exchange Center (IAEC), Huazhong University of Science & Technology, Wuhan, China

Saturday 25 March 2017		
8.30-8.50	Registration	
8.50-9.00	Welcome	
	Joy Zhang University of Kent	Background and rationale of the workshop, housekeeping
	Ruipeng Lei Huazhong University of Science and Technology	
9.00-10.30	Setting the theme: 'Cultural Change' in Scientific Risk Regulation and Communication	
	Chair: Ruipeng Lei Huazhong University of Science and Technology	
	Speakers: Paul Manners National Co-ordinating Centre for Public Engagement	Cultural change in public engagement of science-the UK experience
	Miao Liao & Wenxia Zhang CASTED, Ministry of Science and Technology	Chinese scientific practitioners' attitude and behaviour towards public engagement: Evidence from a national survey
	Jianjun Tang Zhejiang University	Public science communication: scientists' duty to society
10.30-10.50	Tea break	
10.50-12.10	Experience from the field: the GM debate and Chinese particularities	
	Chair: Amy Yizhi Mao British Embassy, Beijing	
	Speakers: Lynn Frewer Newcastle University	Effective food safety risk communication
	Yongbo Liu Chinese Research Academy of Environmental Science	'Inform the public, don't just cheerle
	Biaowen Huang Beijing Jiaotong University	Between scientific and social rationality: a big data analysis on online public debate of GMOs
12.10-13.30	Lunch	
13.30-15.00	Making sense of science: A better way to channel scientific evidence into public debate	
	Convenor: Julia Wilson Sense about Science	Standing up for science in public debates (Interactive training session)
15.00-15.30	Tea break	
15.30-17.00	Varieties of engagement pathways	
	Convenor: Sophie Duncan National Co-ordinating Centre for Public Engagement	What is public engagement and why does it matter? (Interactive training session)

WHAT CHINESE SCIENTIFIC ACCOUNTABILITY 'WILL HAVE BEEN' (CONT)

Sunday 26 March 2017

9:00-10:30 (Re)building and sustaining public trust amid scientific uncertainties

Chair: **Wei He**
Northwest University

Speakers: **Fei Zhou**
Huazhong Agricultural University

Michael Barr
Newcastle University

Trude Sundberg
University of Kent

Hangqing Cong
Zhejiang University

A GM scientist's view on good communication

Public engagement and the Commons

The making of accountable policy in an age of scientific uncertainties

The four problems associated with the Engineering Society

10:30-10:50 Tea break

10:50-12:10 How to make changes happen? Drawing experiences from wider health and life science community in China

Chair: **Joy Zhang**
University of Kent

Speakers: **Lisa Qing Yang**
Animals Asia Foundation

Chunhui Wang
Campaign for Tobacco-Free Kids

Chenfeng Wang
Wuhan Natur

Mediating scientific facts and public opinions through social media: 2012 Bile Bear Controversy

Effective public and policy communication of anti-smoking campaigns

Film clip: How big is a mu?

12:10-12:15 The symbolic importance of the GM challenge: Closing remark

Joy Zhang & Ruipeng Lei

12:15-13:30 Lunch

13:30-14:30 Roadmap to future public engagement and points of collaborations

Closed session, speakers and invited participants only

Appendix 2

Governing Trust in the Biosciences: Institutional and Cultural Change (draft programme)¹

22-23 February (Thursday-Friday), 2018

Venue: Council Room, British Academy, 10-11 Carlton House Terrace, St. James's, London SW1Y 5AH

Thursday 22 February 2018		
8.30-9.00	Registration	
9.00-9.10	Welcome	
	Dr Joy Zhang University of Kent	Background and rationale of the conference, housekeeping
9.10-10.10	Keynote: Why should we trust?	
	Baroness Onora O'Neill University of Cambridge	
10.10-10.40	Tea break	
10.40-12.10	Institutional deliberations and their impacts	
	Professor Christl Donnelly, CBE, FRS Royal Society	Evidence synthesis for policy
	Professor Xian-En Zhang Chinese Academy of Science. Former Director General of Basic Research, Ministry of Science and Technology	The role of evidence in science governance: Evolving relationships between China's scientific institutions, scientists and the public
12.10-13.15	Lunch	
13.15-14.15	Keynote: Scientist, public and the Great Wall	
	Professor Dame Ottoline Leyser University of Cambridge	
14.15-14.30	Tea break	
14.30-16.30	Science communication for a new age	
	Paul Manners/Sophie Duncan National Co-ordinating Centre for Public Engagement	Communicating biomedical risks to diverse (and potentially global) audiences
	Professor Honglin Li China Research Institute for Science Popularization	The investigation and analysis of scientists' engagement in science communication in China: A focus on popular science writing
	Dr Alexandra Freeman University of Cambridge	TV and science: a powerful influence for good or bad
	Dr Chenfeng Wang Wuhan Natur	What does the public really want? The secret of sustaining high trust with 'low quality but reliable' food.
	Reception venue: The Balcon (open to all) Conference dinner: Invitation only	

¹ All titles are only suggestive of the main themes of the talk, and are subject to revision

WHAT CHINESE SCIENTIFIC ACCOUNTABILITY 'WILL HAVE BEEN' (CONT)

Friday 23 February 2018		
9.00-10.20	Unpacking effective accountability	
	Dr Zhiqin Du Deputy Secretary General, Chinese Medical Association	The role of Chinese Medical Association in promoting accountable research
	Professor Nikolas Rose King's College London	Democratising scientific innovation? Beyond responsible research and innovation
10.20-10.40	Tea break	
10.40-12.00	Unpacking legitimating devices in the Sino-European governance of biotechnologies	
	Tracey Brown, OBE Sense about Science	Show your workings: transparent reasoning and public engagement
	Dr Joy Zhang University of Kent	Mitigating the Credibility Paradox: The role of scientific evidence in the public realm in China
12.00-13.00	Lunch	
13.00-14.15	Making changes happen – I	
	Professor Wenxia Zhang CASTED, Ministry of Science and Technology	Research ethics awareness of research personnel in China
	Professor Michael Calnan University of Kent	Trust, uncertainty and the regulation of new medical technology in England
	Professor Stephen Li Du University of Macau	Professional regulations and public trust in biotechnology
14.20-15.05	Making changes happen – II	
	Professor Lu Gao & Dr Miao Liao IHNS, Chinese Academy of Sciences; CASTED, Ministry of Science and Technology	Enhancing scientists' responsibility: the idea of designing an educational module resource for Chinese scientific practitioners.
	Professor He Wei Northwest University, China	From York to Xi'an: A UK-China comparison on educating scientific accountability
15.05-15.20	Tea break	
15.20-16.30	What can dialogues achieve? Agenda setting for UK-China Consortium on scientific communication (Speakers and invited participants only)	
	Roundtable discussants:	
	Paul Manners/Sophie Duncan National Co-ordinating Centre for Public Engagement	
	Professor Yali Cong Peking University	
	Professor Lynn Frewer Newcastle University	
	Professor Ruipeng Lei Huazhong University of Science and Technology)	

REFERENCES

- Barlow, T E (2004) *The Question of Women in Chinese Feminism*. Durham: Duke University Press.
- Bell, S, and Hindmoor, A (2009) *Rethinking Governance: The Centrality of the State in Modern Society*. Cambridge: Cambridge University Press.
- Department for Business, Energy & Industrial Strategy (BEIS), UK (2017) *Joint UK-China strategy for science, technology and innovation cooperation sets new horizons for closer international collaborations*, Press Release. Published on 6 December 2017.
- Foreign & Commonwealth Office and Department for Business, Innovation & Skills (FCO and BIS) (2013) *UK Science and Innovation Network: Working with China*, Available at: www.gov.uk/government/priority/uk-science-and-innovation-network-working-with-china
- House of Lords (2000) *Science and Society, House of Lords Select Committee on Science and Technology Third Report (Session 1999-2000)*. London: Stationery Office.
- Hu, Q (2010) From 'been engaged' with science to 'to engage' with science. *Guangming Daily*, 17 May 2010 (in Chinese). Available at: www.gmw.cn/01gmr/2010-05/17/content_1122289.htm
- Jasanoff, S (2005) *Design on Nature: Science and Democracy in Europe and the United States*. Princeton: Princeton University Press.
- Leong, C C, Jarvis, D, Howlett, M and Migone, A (2011) 'Controversial science-based technology public attitude formation and regulation in comparative perspective: The state construction of policy alternative in Asia'. *Technology In Society* 33, 128–136.
- Liu, Z W (2017) 'Let the public be part of scientific research', *Science and Technology Daily* (in Chinese), 27 March 2017. Available at: www.stdaily.com/cxzg80/kebaojicui/2017-03/27/content_528013.shtml
- Ministry of Science and Technology China (MOST) (2012) *National Special Planning of Science Popularisation in the Twelfth Five Year Plan*. 5 April 2014. Beijing: MOST
- Nature Index China (2017) 'Onward and upward'. *Nature* 545, S40-S41.
- Qiu, J (2014) 'Controversy of GM crops in China', *National Science Review* 1(3), 466-470.
- National Coordination Centre for Public Engagement (NCCPE) (2008) 'The Beacons for Public Engagement' Available at: www.publicengagement.ac.uk/sites/default/files/publication/nccpe_bridging_the_gap_brochure_0_0.pdf
- State Council, China (2006) *Outline of National Action Scheme of Scientific Literacy for All Chinese Citizens*. Available at: www.gov.cn/gongbao/content/2006/content_244978.htm
- Wu, G and Qiu, H (2012) 'Popular science publishing in contemporary China'. *Public Understanding of Science* 22(5): 521–529.
- Wynne, B (1980) 'Risk, technology and trust: On the social treatment of uncertainty'. In: Conrad J (ed.) *Society, Technology and Risk*. London: Arnold, pp. 83–117.
- Zhang, J Y (2015) 'The "Credibility Paradox" in China's Science Communication: Views from Scientific Practitioners', *Public Understanding of Science*, 24(8), 913-927.
- Zhang, J Y (2016) 'Public engagement: The next area of expansion in science', *People's Daily (Overseas Edition)* (in Chinese), page 6, 19 December 2016.
- Zhang, J Y (2017a) 'Lost in Translation? Accountability and Governance of Clinical Stem Cell Research in China'. *Regenerative Medicine*. DOI:10.2217/rme-2017-0035.
- Zhang, J Y (2017b) *The Problem with 'Problem Solving': Pragmatism in China's Ethical Governance of the Life Sciences*. A set of working papers with focus on biomedicine, bioscience and bioengineering. Delivered at Peking University Health Science Centre, Chinese Academy of Sciences. and Zhejiang University in September 2017
- Zhang, J Y (2017c) 'Transparency Is a Growth Industry', *Nature*. 545, S65.
- Zhang, J Y (2017d) 'How to be modern? The social negotiation of "good food" in contemporary China'. *Sociology*, DOI: 10.1177/0038038517737475.
- Zhang, W, Zhang, J Y and Liao, M (2017) 'Global leadership in science and China's engagement with public opinions' (in Chinese), Internal Policy Memo submitted to and reviewed by CASTED, Ministry of Science and Technology in November 2017.
- Zhang, J Y and Liao M (2017) Educational Module Resource for Chinese Scientific Practitioners (in Chinese). Online access: www.kent.ac.uk/gsa/emr
- Zhang, J Y (2018) 'Cosmopolitan risk community in a bowl: A case study of China's Good Food Movement', *Journal of Risk Research*, DOI: 10.1080/13669877.2017.1351473
- Zhang, J Y and Barr, M. Understanding the transformative power of commoning and alternative food networks. Under review.

Summary of the project

This is an ESRC funded project which aims to promote good practice and accountable science in China, through a comparative study of stem cell and GM food regulations. The study identified 'post-hoc pragmatism' as a particularly disruptive regulatory ethos in China's science government. The over-politicisation of science further created a 'credibility paradox' which inversely effected public confidence in institutional science. In addition to academic publications, the project experimented with the first UK-China multi-stakeholder training workshop on risk communication, launched the pilot Educational Module Resources on public engagement in leading Chinese universities and submitted policy recommendations to China's Ministry of Science and Technology.

Project website: www.kent.ac.uk/gsa

About the author

Joy Y Zhang is Senior Lecturer in Sociology at SSPSSR, University of Kent. Originally trained as a medical doctor, her research investigates the transnational governance of scientific uncertainty, with a focus on the Sino-European context. She is particularly interested in how actors in non-Western societies capitalise on the concept of global risk and how this gives rise to new modes of social intervention. Her work has fed into the policy making of the Royal Society in the UK and China's National Health and Family Planning Commission, and Ministry of Science and Technology. She is the author of two academic monographs: *The Cosmopolitanization of Science: Stem Cell Governance in China* (2012) and *Green Politics in China: Environmental Governance and State-Society Relations* (2013).