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Murder Maps, Transport Apps, and Soup: How Expert Enthusiasts Move Open Government Data Initiatives between the UK and China

*Cancan Wang & Jessamy Perriam **

Abstract: »Murder Maps, Mobilitäts-Apps und Suppe – Die Bedeutung enthusiastischer Experten für Open Government Data-Initiativen zwischen Großbritannien und China«. This study investigates the dissemination of the open government data concept as processes of change occurring in a globalized world. We use the concept of model travelling from global studies to unfold how open government data as an idea travels across places, especially how the idea in one place is related to changes in other places. We pay attention to the specific ways actors are engaged in the travelling of digital “ideas.” Empirically, we follow the travelling of the open government data concept between the UK and China, since 2009. Our finding provides a different picture on how social changes are ordered around open government data, which is different from the modernist or diffusionist view that believes social changes are concerted efforts driven by rational choice and diffuse from a fixated cultural centre to its peripheries. Rather, social changes around technology movements emerge haphazardly among networks of expert enthusiasts committed to the change process by their attraction to the fun and affective atmospheres around these movements. Their centres and peripheries of changes configure organically as the dynamics in the networks of actors evolve; and the directions of change can be multiple and simultaneous.

Keywords: Open government data, social change, digitalization, expert enthusiasm, UK, China.

1. Encountering the Expert Enthusiast

To date, you can find Gao Feng in the alumni page of Yale World Fellows Programme, a prestigious leadership programme dedicated to the professional training of world leaders of global affairs. He was selected for the 2019 programme as “an open data innovator from China,” who “actively advises

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governments and other data holders on how to build an open and transparent data agenda” (Maurice R. Greenberg World Fellows Program 2022). Prior to his enrolment in the programme, he was frequently interviewed in international media, such as *The Guardian*, as one of the representative voices on open data in China.

Our first encounter with Gao Feng, however, began rather casually in a university-based lab in Shanghai, China. In 2015, while one of the co-authors, Wang, was doing her fieldwork on local public digital transformation in the Lab for Digital and Mobile Governance, Gao Feng dropped in for the lab meeting. The lab manager described Gao Feng as a PhD graduate from the University of Southampton, who he found on the Chinese social media Weibo, and said they were collaborating on open data projects funded by the local municipality and the World Bank. Intrigued by his eclectic selection of local and international involvement, Wang contacted Gao Feng to hear more about his work. Instead of formal meetings, she was invited into gatherings. These gatherings can be a testing event with interested participants on translated open data games, or a friendly chat in a café with an open data advocate in Taiwan who also happens to be a travelling motorist. Gao Feng and the group of expert enthusiasts will play a defining role in how we conceptualize concepts travelling across countries later in the article.

Commonly known as open government data (OGD), in recent decades, governments have been releasing increased amounts of data for the public to use and analyse. Although existing reports and studies often focus on the best practices of government and other organizational actors such as private companies and non-government organizations (NGOs), individuals from various standpoints and interests have in fact played an essential part in advocating for opening and utilizing government data for causes such as activism, journalism, and entrepreneurship. While some of these individuals’ work with open government data are placed in the spotlight of international media coverage as figureheads of the movement, their engagement may begin through eclectic, interest-driven data-scraping or visualization activities rather than setting out to make it a professional career. We call these stakeholders expert enthusiasts to signify their level of expertise combined with a rejection of establishing a corporate career in favour of sharing their knowledge with others. By calling them enthusiasts, we also emphasize the importance of personal affect in driving experts’ engagement in the open government data movement, and subsequently the haphazard development movements such as these may take on. Gao Feng and the people we met through him in Shanghai are exemplary of such stakeholders in the open government data movement.

In this paper, we argue that open government data initiatives travel between national contexts more often through rather haphazard, organic means than a strictly concerted effort or campaign to formally operate in a

local context. In other words, it is the enthusiasts who are often overlooked in their contributions to shift open government data initiatives across borders in addition to technology sector professionals or politicians who have clearly calibrated agendas. Through interviews and document analysis, we describe how open government data initiatives were established in the UK and China and how they operate within their respective local contexts. We make the case for this by describing the messy, organic, and social means by which open government data initiatives were introduced into China by Chinese expert enthusiasts who had encountered the work of UK-based non-profit open data initiatives such as the Open Data Institute (ODI).

Understanding experts' eclectic and affective choice of engagement in open government data movement helps to develop the research on technology movements at large. We suggest that this form of introducing technology movements into other national and cultural contexts by expert enthusiasts means that what is being introduced is not merely a carbon copy of the original organization; rather, it is becoming an organization that is tailored to the needs, interests, and restrictions of the new setting. Our analysis also makes the case for the role of figureheads in technology movements as visionaries who establish the direction and potential for open government data but are largely absent in the everyday work of advocating for the adoption of these initiatives.

In the following, we start by outlining differing approaches and motivations around the global movement of open government data and position the current approaches in the UK and China accordingly. This is followed by an introduction of the concept of model travelling as a theoretical lens for understanding the travelling of open government data as a technology movement. Supported by a brief presentation of our methodological considerations, we present our empirical findings on the travelling of the open government data concept among the UK and China, where we first give a snapshot of how open government data is operationalized in both countries and carry on explaining how they are related to each other through various processes of travelling. Built upon our empirical findings, we end this paper with concluding remarks on our understandings on how social changes are ordered around open government data as technology movements.

Overall, this study contributes to a cross-cultural socio-historical perspective on digital transformation by focusing on open government data as one of the primary drivers for public digitalization around the world. We propose expert enthusiasts are an important social actor for understanding how a global digital transformation movement, such as open government data, takes place. Our focus on the travelling of open government data across the UK and China also helps to overcome an Anglo-Saxon-centred and European research perspective on digital transformation.

2. Approaches to Open Government Data

2.1 Mapping Open Government Data Movement

Open government data is a global movement that encourages governments to open “non-privacy-restricted and non-confidential data which is produced with public money” and make them available “without any restrictions on its usage or distribution” (Janssen, Charalabidis, and Zuiderwijk 2012, 258). This movement is driven by a range of government initiatives, such as the Open Government Initiative from the US, multi-lateral government partnerships such as Open Government Partnership, and global organizations such as the World Bank, UN (United Nations), and OECD (The Organisation for Economic Co-operation and Development) (Gil-Garcia, Gasco-Hernandez, and Pardo 2020).

The movement concerns primarily government actors who promote participatory democracy that centres on the idea of increased transparency and accountability (Meijer 2014, 2015), but also attracted actors across the private sector and civil society, giving rise to a variety of approaches and interests (Gil-Garcia, Gasco-Hernandez, and Pardo 2020). Gonzalez-Zapata and Heeks (2015), for example, have observed three different approaches to the movement, depending on whether the primary focus is on public service, participation, or data technologies.

Focusing on *government* as the single largest collector, user, holder, and producer of information about citizens, organizations or public service delivery, the *government data* approach concerns how data as a resource for improving public service is managed in the public sector (Otjacques, Hitzelberger, and Feltz 2007). In this approach, open government data is viewed as a policy initiative that aims at supporting public service delivery through improved manipulation of regulations, strategies, and processes (Bates 2014).

Emphasizing citizens and civil organizations and their empowerment, the *open government* approach aims at improving the transparency of and possibilities to participate in government decision-making (Lathrop and Ruma 2010; Meijer, Curtin, and Hillebrandt 2012). Following this approach, open government data is viewed as a fundamental right, which means all citizens should have access to government or public sector data (Yu and Robinson 2011). The drive to engage with open movements is therefore to balance the power dynamics between government and non-government stakeholders by improving the transparency and accountability of government officials and functions and increasing the participation of citizens and civil organizations in government decision-making (Janssen 2012; Raman 2012).

Focusing on the information and communication technologies (ICTs) deployed in improving the data accessibility (Zuiderwijk and Janssen 2014),

open data approaches primarily concern the ICTs deployed for handling (government) data, and its innovation and diffusion in the design of formats, processes, and standards (Kalampokis, Tambouris, and Tarabanis 2011; Gao, Janssen, and Zhang 2021). The motivation for the open data approach is often to provide or enhance a data infrastructure where data adheres to both foundational qualities (e.g., accuracy, completeness, timeliness) and distributive qualities (e.g., availability, reusability, interoperability), and which is readily accessible and interoperable with other datasets and systems. In comparison to the two previous approaches, *open data* approaches extend the emphasis on government as the primary actors to other private sectors, civil organizations, and individual citizens. As the stakeholders diversify, its primary focus also extends from improved public service delivery, increased transparency, and accountability to improved data infrastructure and potential economic gains such as entrepreneurship, innovation, and economic growth.

While the conceptual mapping of foci in open government data movement points to similarities and differences motivated by different institutional efforts, in practice, the actual approaches to open government data can be combined and constantly in flux. In the following, we give an introduction of the historicized definitions, initiatives, and actors of open government data in China and the UK to set the stage for our study.

2.2 Open Government Data across China and the UK

In 2012, Francis Maude, Minister for the Cabinet Office and Paymaster General in the UK government, presented *Open Data White Paper: Unleash the Potential* to Parliament. In the white paper, data is praised as “the 21st century’s new raw material” that has the potential to hold governments accountable, drive choice and improvements in public services, and spur social and economic growth by inspiring innovation and entrepreneurship. By that point in time, the UK government’s open data repository (data.gov.uk) had been live for three years. The white paper therefore sets out to unlock the potential of open data, which is defined as data that meet three criteria: 1) “accessible (ideally via the internet) at no more than the cost of the reproduction, without limitations based on user identity or intent; 2) in a digital, machine readable format for interoperation with other data; and 3) free of restriction on use or redistribution in its licensing conditions” (Great Britain Cabinet Office 2012).

Almost a decade later, more than half of all the provinces in China have released their own open data regulations. Building on these local regulations, on September 1, 2021, the Data Security Law became effective in China, where the entire Chapter 5 is dedicated to the security and opening of government data. While there is no specific definition of open government data, the chapter appears to partly share the UK government’s vision in 2012. For example, article 42 suggests that “the state shall formulate the catalogue of open

government data, build an open, uniform, standardized, interconnected, safe and controllable government data platform, and promote the release and utilization of government data” (The National People’s Congress of the People’s Republic China 2021). But how do these visions come into being in the UK and China?

Open data in the UK context has largely grown alongside a similar movement that has seen digital transformation gain priority and influence within the public sector in the 2010s with the introduction of the Open Government Licence by the Labour government in 2010 (Macaulay and Trueman 2019). In short, the Open Government Licence allows both public and private sector parties the ability to access and use non-personally identifiable government data under similar conditions to that of a Creative Commons licence, which allows reuse of content with attribution to the original source. Around the same time that the Open Government Licence was launched, public sector technology specialists were making the case for more *efficiency* in the government’s technology spend (Maxwell et al. 2010), which laid the groundwork for establishing the Government Digital Service (by the incoming Coalition government) as a central government department to reform technology use across the government. To give an example, at the time of Maxwell’s report, *Better for Less*, the UK government was spending more funds on information technologies than it was on the nation of Wales (Maxwell et al. 2010).

Similarly, China’s open government data movement was preceded by decades of efforts for informatization to harness the potential of IT to drive the transformation of economy and society (Qiang 2007). As technology development evolves rapidly, China’s informatization strategy also updates with an increasing focus on information and data. For instance, in 2008, China passed national Open Government Information regulations requiring disclosure of a wide range of government agencies’ information.

While these regulations indicated the beginning of recognizing the citizens’ rights to government data in China, they also revealed the opportunities and challenges posted by China’s socio-economic conditions. Facing the fast-growing economy with a large, diverse, and widely spread population, the Chinese state views IT as an important change agent in making government functions more service-oriented, efficient, and transparent. Societally, informatization of government functions is expected to reduce disparity and bring about a more balanced and equitable social and economic development across the country (Qiang 2007). Meanwhile, these IT-enabled government functions are expected to improve resource allocations in the society to increase market efficiency and sustain economic growth. The focus on ICT in government policy is also expected to enhance Chinese enterprises’ capacity for technological innovation in a broad range of products and processes.

The UK’s rationale for both open data and digital transformation operate similarly to the premise that transparency is vital to retain public trust and

act in cost-effective ways. Indeed, a popular slogan in the earlier years of the Government Digital Service was “Simpler, Clearer, Faster.” Both areas act in the public interest by making information, transactions, and data more publicly accessible.

However, open data is just one of the many ways in which *public accessibility and accountability* can take place within digital transformation. For instance, open data does not necessarily need to originate from public sector sources, they can be (and often are) generated by private sector organizations that are contracted to provide public sector services.

In the UK context, one of the key organizations in open data is the Open Data Institute (ODI). Founded in 2012 by Sir Tim Berners-Lee and Sir Nigel Shadbolt, their intention was to “show the value of open data, and to advocate for the innovative use of open data to affect positive change across the globe” (theodi.org 2021). In practice, this translates into *education, networking, and lobbying activities*, with both national and international foci. As the organization has progressed, the mission has been refined to “work with companies and governments to build an open, trustworthy data ecosystem. We work with a range of organizations, governments, public bodies, and civil society to create a world where data works for everyone” (theodi.org 2021). There are also organizations of similar nature such as Open Knowledge Foundation (OKF), whose mission is to “create a more open world” by providing training, consulting services, and community and campaign catalyser across the world. Through this work, Open Knowledge Foundation aims at supporting people and organizations to go “on a journey from first learning about the concepts of openness and open knowledge to becoming open ambassadors helping us to change the world” (okfn.org 2022).

The parallel surge of discussion in China on big data and the open government data movement in the 2010s have given new opportunities to advance the existing focus on informatization with an articulated focus on data. For example, in 2015, the Chinese Prime Minister Li Keqiang proposed the Internet Plus strategy in his government work report as an update of the current informatization development (The State Council of the People’s Republic of China 2015). The Internet Plus strategy was built on a continuous drive to transform government services and modernize Chinese industries and businesses to sustain economic growth. The strategy specifically pushes forward the application of data-driven technologies in government and conventional industries, including manufacturing, finance, medical systems, and agriculture.

Today, the development of China’s open data movement appears to be primarily driven by the central government’s push for innovation and entrepreneurship and need to increase government effectiveness and efficiency. And these drives are translated into local initiatives and data platforms that satisfy the need to disclose and encourage citizens’ use of the public data and to do

it in a way that makes sense to the market (Gao 2018). Nonetheless, in practice, the central government's policy focus on data is also largely attributed to the initiative of local governments, research institutes, NGOs, and private actors, organized in the forms of policy, open data portal, and local open data contests (Gao 2018; Wang and Staykova 2019). These local initiatives are influenced by existing international open data networks or institutes, such as the UK based organization OKF, as well as the existing initiatives such as contest series Open Data Challenges organized by the ODI. However, it remains unexplored how the focus of open data movement in China and the subsequent social changes are connected to international influences such as the ones in the UK.

3. Theoretical Lens

Ruppert, Isin, and Bigo (2017) argue that data has become an important source of new power dynamics as the datafication of our society deepens. In the context of global technology movements such as open government data, this means that the travelling of “digital” ideas is not only driven by formalized institutional efforts. It is also pushed by “a network of *informal* actions between a plurality of individuals, groups, and/or organizations (Turner and Killian 1987, 4), who engage in “political or cultural conflicts on the basis of shared collective identities” (Diani 1992, 1). The aspect of informal interaction is especially relevant, considering the incongruence between the role of government in maintaining stability, security, and the status quo, and the emphasis on change in fostering technological innovation. Social constructivist research of technology suggests that scientists and technical experts and their knowledge play a particular role in “the functioning of knowledge, transparency and accountability” in a political system (Bijker 2006). They do so by being involved in boundary work between science, technology, regulation, and politics through activities such as technology assessment. This view partly resonates with a prevalent narrative of open government data, where the benefits of open data are assessed by figurehead scientists (such as Sir Tim Berners-Lee and Sir Nigel Shadbolt) (Open Data Institute 2015).

While Bijker brings our attention to technical experts and their boundary work in democratizing politics, there also seem to be a particular imagery of technical experts whose judgements are “keyed only to the statistical probability of harm” that permeate his analysis (Yearley 2001, 13361, cited in Bijker 2006). He does not consider experts that move across different local communities, and how these movements shape experts' ideas about technologies and their role in political deliberation under the influences of different beliefs, values, and rationalities.

To operationalize our research inquiry, we start by understanding how an idea travels in a global context, that is, how change in one place is related (or not) to developments in other places. Some existing theoretical strands – such as diffusionism (Eriksen 1991), neo-institutional theory (Czarniawska and Joerges 1996), modernization theory (Rostow 1990), and rational choice (Schumpeter 1942) – suggest an impression of our world that is constituted by centres and peripheries. An (new) idea often diffuses from cultural centres to peripheral regions, especially from the Anglo-Saxons to the rest of the world because of a particular person or a collective (e.g., the technical elite) rational choice in relation to political and economic gains. For instance, the idea of open government data seems to be mobilized through the entrepreneurial planning of elite Western initiatives such as ODI and OKF, or policy initiatives by the Western governments such as the US or UK, to what is perceived as the developing part of the world (Altayar 2018).

Zooming in on why and how an idea travels, globalization studies researchers, such as Behrends, Park, and Rottenburg (2014), follow the materialistic inscription of ideas and provide a more nuanced picture of an idea travelling – it is not only unidirectional from a set centre to peripheries, but it is also “messy,” entangled in the socio-material practices of knowing and ordering the world, and mediated by various actors. Directing their analytical attention to the travelling apparatus of ideas-*model*, Behrends, Park, and Rottenburg’s view of how an idea travels in a global context differs from the existing theoretical strands on idea travelling along three lines: *directions*, *mediators*, and *motivation for mediation*.

Here, model refers to a material inscription of a particular analytical representation of reality (e.g., a model about what constitutes open government data), which is created with the purpose of transporting a particular representation of reality and shaping reality accordingly (Behrends, Park, and Rottenburg 2014, 1-2). For models to travel, they need to be de-territorialized from one setting and re-territorialized into another (Czarniawska and Joerges 1996; Nielsen, Mathiassen, and Newell 2021). This implies that the centres and peripheries of idea-travelling are generated and constantly reconfigured as tokens like models are being circulated. The idea, in this sense, moves from and to different directions simultaneously.

Moreover, models do not diffuse by themselves but are being transferred and inevitably translated. The working of models suggests that a travelling idea constantly involves mediators – various actors who convey, carry, pick up, call for, and interpret models. Not only the mediators can pass on ideas, but they also translate ideas by holding the power to influence these ideas and giving them a personal twist. Mediators, as well as their influences and rationalities, are particularly important for understanding the development of open government data across different localities.

In explaining why actors pick up new ideas, Behrends and his colleagues argue it has to do with the “aura” of the idea and the “meta-code” established by the stakeholders who decide to adopt the model or the idea. More specifically, “aura” refers to the invisible appeal of an idea, which can be an act of imitation, or dependent on the way of mediation or the existing circumstances of the receiving sites, but not always of rational choice. In the context of open data, for instance, it is often connoted as a universal solution strategy with an “aura of truth, objectivity and accuracy” (Boyd and Crawford 2012, 663) or in a persuasively moral imperative such as democracy. In addition, “meta-code” refers to the reality construction that is among stakeholders with diverging positions to agree on engaging a particular idea or model. Evaluative categories such as efficiency, fairness, or legitimacy can be used as an instrument for forming “meta-code” amongst competing rationality.

Along this line, the concept of model travelling helps us to move away from the understanding of idea travelling in open government data as a well-defined, smooth, and purpose-driven movement that is carefully planned and carried out by professional, elite, and often male actors who have a clear vision. These would-be actors that we would classify as figureheads (Mintzberg 1971), such as the presentation of Gao Feng described in the Yale leadership programme. Instead, it points us to other imaginaries of travelling that are driven by a network of mediators who are initially interested in tinkering and playing with the idea rather than strategically implementing the idea for career progression or monetary gain. In fact, a formally recognized figurehead can also be one of the mediators in practice. We call these mediators “expert enthusiasts” due to the fact they are quite often skilled in this area but do not initially want to be professionals in this space. The motivations of expert enthusiasts are not always clear, and their interests may not only diverge from each other but also fall outside of their direct professional interests. As these mediators make sense of the idea, they can therefore spontaneously take the travelling to different directions and the idea can be adapted, appropriated, mixed, resisted, or rejected along the way.

Understanding the travelling of the concept of open government data across the UK and China is thus not to identify how an initial idea of open government data travels from one location to another, but to follow the “model,” that is the representations and definitions of open government data, and to recognize the emergent centre-periphery as it is being transferred from one actor to another. Studying the travel of open government data therefore involves identifying the in-between spaces and steps of idea travel where the changes happen. This includes mapping the actors that carry the idea of open government data in its travel and translate it for local reception and investigating what drives the actors to pick up a certain idea and how the actors reflect upon and reconcile between different rationalities. As such, our

findings focus on the expert enthusiasts who worked building communities around open government data initiatives in and amongst China and the UK.

4. Methods

In this study, we place emphasis on the process of open government data's travel as the main empirical object. Looking at travelling concepts suggests we follow the concept to different places and analyse how it moves from one place to the other. We have taken a qualitative approach to gathering data for this article. The data are derived from a combination of field observations, interviews with key actors in the open government data movement, and primary and secondary sources documenting the establishment and practices of open data in China and the UK from the early 2010s to the present. Informed consent was gained from interviewees and primary and secondary sources are cited in the text.

Our choice of the case coincides with the Western media's focus on the introduction of open data and the governance consequences in China around 2015 (Ross 2015). Gao Feng was one of our key informants around the time. He founded Open Data China in 2014 – the first civic organization based in China that promotes open data and collaborates widely with local universities, municipalities, and companies in Shanghai, as well as international organizations such as the World Bank on open data related initiatives. While we followed his work in different lab meetings, café meetups, and dinner gatherings, his comments on open data appeared frequently on media reports as one of the representative voices in China. In these reports, the media at the time largely focused on his role as one of Open Knowledge China's ambassadors in Shanghai and presented him as a mission-driven NGO founder who is “dedicated to promoting and building up an open digital society” (okfn.org 2022). These reports revealed the importance of international networks, in this case between the UK and China, in shaping the making of figurehead and narratives around open government data. This image of a serious, mission-driven elite who is fighting for social change is also contrasted with our observation of the more relaxed and informal interactions among local individuals and groups that forms an important part of the movement.

We took departure from such contrasts that emerged in the media narratives and our observations to focus on how individual journeys are woven into the development of the open government data movement. To do so, we have utilized three data sources: 1) available presentations to the public, published online articles, and reports written by our key informants on the development of open government data movement in China; 2) our field observations on the making of open data initiatives in Shanghai as well as the online interactions on Chinese social media such as WeChat; and 3) follow-up interviews

conducted between 2015 and 2021 with the key informants. The key informants emerged in our field observations, actively driving the making of open government data platforms, hackathons, and building the knowledge base. They are also part of the same network where people have regular informal interactions such as chats and gatherings.

On the one hand, our fieldwork resulted in 15 formally set-up interviews, 28 hours of observation of offline events, and shadowing of online chats that took place mostly in 2015 and 2016 when the local open government data movement was under initial development and most active. On the other hand, our fieldwork is also constituted by numerous hangouts, informal chats, meetings, and reading of documents that kept informing our understanding of the evolution in the local narratives and practices.

In ordering these narratives and observations, initially we paid attention to the recurring narratives at the beginning of the open government data movement in China, which often point to the three-dimensional definitions of open data like the one raised in the Open Data White Paper or OKF (i.e., availability and access, reuse and redistribution, and universal participation). Further references are also made to the OKF and ODI in the UK as important connecting dots for distributing open data knowledge. In tracing these connections to the UK, we have drawn on interviews with key actors in the UK and China. For instance, in China, we have interviewed representatives of open data advocates that emerged to be relevant in our fieldwork. These advocates are affiliated with government organizations (e.g., Shanghai Municipal Commission for Economy and Informatization [SHEITC]), companies (e.g., China Industrial Design Institute [CIDI] Shanghai, Enerlong, Kesci), universities (e.g., the Open Meta Nexus Innovation Lab [OMNIlab] at Shanghai Jiaotong University and the Lab for Digital and Mobile Governance [DMG] at Fudan University), and NGOs (e.g., Open Data China). In the UK, we focused on publicly available documentation from the ODI (with a focus on the ODI North node), the Government Digital Service, data.gov.uk, and publications from key actors and researchers such as Liam Maxwell and Jerry Fishenden to narrate the history of open data since 2009.

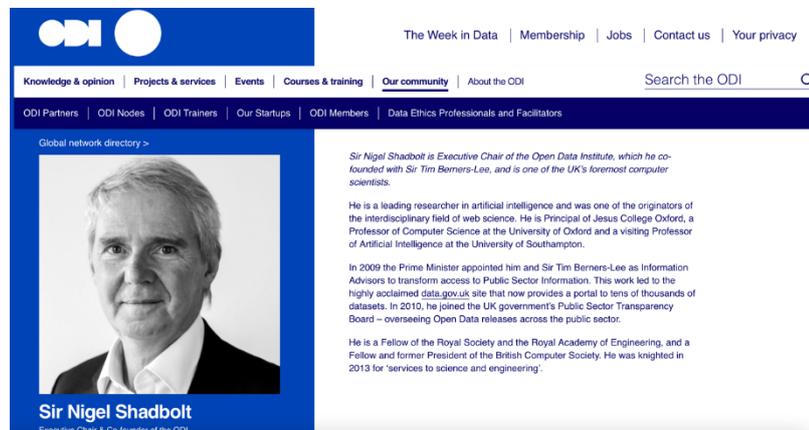
While these interviews provide both formal and personal accounts of the local development of open government data, a revealing moment took place when one of the co-authors conducted a follow up interview with our key informant Gao Feng in 2019. When asked why he chose to engage with the OKF in the first place, instead of telling a heroic story about bringing changes, he told us about the odd jobs he incidentally did for the OKF when he was a PhD student. The occasional absence of the heroic change stories thus pushed us to order our collected empirical materials following accidental encounters and personal drives, providing an alternative account of open data development.

As such, our analysis takes on the form of a historiography that charts the development and transition of the open data movement across geographical contexts. We focus on the role of local actors in bridging the emergent interstitial spaces that are the spaces between a model's travel and its local reception. Our methods choices support our narration of open government data organization transitions that are not merely planted identically from one national context to another; rather they are experienced in one national context and moulded to the cultural and technological interests of another. Through these methods, we suggest that the enthusiasm and expertise for open data remains the same and travels to different contexts, but the organizing structures shift according to local interests and priorities.

5. Findings: Travelling Open Government Data

We will begin our findings by introducing how open government data is operationalized in the UK and China to give an impression of the current state before we dive deeper into the journeys that connect the movement across these two countries.

Figure 1 A Screenshot of the Official Page of Sir Nigel Shadbolt on ODI's Webpage



Open government data has been operationalized for multiple purposes within the UK, some of which are outlined in the subsections below. Some of these purposes hold more promise and staying power, while others have tended to wither on the vine. It is also important to note that the uses and value of open government data differ greatly depending on who is working with the data and to what end (Gray, Gerlitz, and Bounegru 2018). In the main,

open government data usage and uptake in the UK depends on the methods and modes in which the data are delivered to users. For instance, purposes depending on live APIs tend to see more use because a steady stream of updated data is automatically delivered; whereas initiatives (such as accountability), which largely depend on manually uploaded datasets in the form of .csv files, spreadsheets, or even pdfs (which push the open data criteria of machine-readability to its extreme), are not as regularly updated.

Figure 2 A Group Photo Taken at the Workshop “Yan Do Xian” on Data and Innovation in Fudan University, Shanghai, China



The pictures above (Figure 1 and Figure 2) are probably telling of the differences between the approaches to open government data in the UK and China. Different from the centralized efforts in the UK, at an operational level, open government data in China took a bottom-up route and is materialized into experimental initiatives that primarily take place at a provincial and city level, and in the form of data portals, open data application contests, commercial application development, and policy-making. While data portals primarily address government transparency and accountability through standardizing efforts, open data contests focus more on stimulating the commercial potential of open government data. These local experiments and explorations sprang into a diverse range of national and local policies, which focus on identifying the goal of promoting and regulating open government data.

5.1 Operationalization of Open Government Data in the UK

Open Data for Entrepreneurship and App Development

On a daily basis, UK residents will benefit from using open data, although there are some regions and cities where this is more readily available. One high profile example of open data use in the UK is from Transport for London (TfL) – the *not-for-profit* organization that runs the city’s public transport services. TfL provides both live and static data feeds for developers to use for many purposes. For example, the journey planning app Citymapper started in London (Citymapper 2021) making extensive use of TfL’s journey planner and live status APIs (Transport for London 2021) to provide users with detailed and live information to get from A to B. However, this good news story is restricted to London. Other cities and regions in the UK do not have a unified, not-for-profit organization running their public transport services and instead have a *patchwork of private providers* who have won contracts for running particular routes. While some of the public providers provide open data to allow service users to have live information, there are others who do not, leaving communities with incomplete information (Forth 2021).

Open Data for Accountability

In the UK, open data serves more purposes than making life more convenient for its citizens. On the government side, open data plays an accountability role. For example, the website, data.gov.uk holds more than 55,000 datasets from government departments and local councils. These datasets cover a wide variety of statistics about the life of a nation, such as how much money is given to charities through the Gift Aid programme, how many people under 25 have diabetes in England and Wales, or how much energy is used in the East of England. The provision of these datasets as open data has had many implications in terms of transparency, data standards, and public accountability. On the other hand, the success of open data for accountability relies on the regular release of data from government departments. For many reasons – both political and operational – data sets are not often updated (Macaulay and Trueman 2019).

Open Data and Standards

One of the problems that has been identified around the deluge of datasets posted to data.gov.uk is that of formatting. Although the data are there and available for citizens, journalists, or other interested parties to access, there is inequality in being able to use and analyse the data. This is because the datasets are not created or posted in uniform formats. One dataset may be posted as a .csv, which can be easily read by spreadsheet software and statistics software, while another dataset may be posted as a pdf, which can be

difficult to extract data from. This disparity in data raises questions about how accessible open data really are in the government context.

5.2 Operationalization of Open Government Data in China

Open Data Portals for Accessibility and Accountability

If one searches for open data portals in China, many open data portals that are operationalized at the provincial and city level will appear with a few at a national level. Starting in 2012 with the government data portals in Shanghai and Beijing, today there are 18 provincial-level government data portals (64.29% of provincial governments in China) (Fudan DMG 2021c) and 156 city-level government data portals (46.29% of city government in China) in China (Fudan DMG 2021b). At the local level, the citizens can monitor local pollution source and water quality, benchmark local healthcare programs and pricings, or check if a restaurant recycles waste oil or not. At the national level, government data portals are established by national bureaus such as the National Statistics Bureau and National Meteorological Bureaus, which provides access to the results of national censuses or visualization of satellite weather data (Opendatachina.org 2021b). Citizens can access and compare differences in population statistics provided by the bureau and the census. In the case where, for instance, citizens have raised concerns regarding a discrepancy in the census data, the National Statistics Bureau also releases responses to address these concerns (Chinese National Bureau of Statistics 2021).

There are five key datasets in national policies and local regulations that are prioritized to be open and updated, including data related to company registration, public transportation location, logistics certification/business license, weather forecast and alarm, and COVID-19 prevention and control. Despite the policy emphasis, like the UK, these datasets are not always updated. The size, granularity, and update of these datasets can vary greatly across cities (Fudan DMG 2021a).

Open Data for Entrepreneurship and App Development

As local provinces and cities continue to establish their government data portals, there also has been a mushroom of open data contests since 2014, where citizens and organizations are invited to make use of these released data to address specific urban issues such as transportation or security in city (Opendatachina.org 2021a). These contests often serve three purposes: to stimulate ideas of application; to motivate local government agencies' open data; and to materialize the prototypes into commercial products or public services. One example is Shanghai Open Data Applications, which focused on themes such as transportation and food security. These open data contests have given rise to applications that address citizens' different needs. For example, a local navigation application company Gaode has developed a service

element on parking based on the live data stream of parking lots on availability, price range, and location to help optimize users' parking decisions (ChinaOpenDataIndex.cn 2020). Another application is developed to provide a multi-dimensional evaluation for local residential communities based on government data and available online datasets to help citizens make housing purchase/rental choices based on their individual needs (ChinaOpenDataIndex.cn 2020).

As more municipalities embark on one or more of these efforts, they often fragment and differ in terms of progress. A large majority of open government data initiatives are not known or being effectively utilized by citizens (Fudan DMG 2021c). These initiatives are also challenged by unsolved issues such as how to define the extent and standards of open data, how to motivate local governments to provide data access, how to build and maintain open data portals, and how to ensure the sustainable generativity of open data applications.

5.3 Travelling among the UK and China

To understand how the open government data approaches in China are connected to those in the UK, we tracked the movement of open government data by following the arrival and subsequent actions of an Open Knowledge Foundation ambassador from the UK to China, Gao Feng, as well as the locally grown government initiatives who sought for open government data. Their paths revealed that the introduction of open government data in China is an emergent improvisation and adaptation instead of a careful design or an implementation of an existing model. The route it takes follows the people who carry the concept and is often messy and multidirectional.

Taking-Off from the UK and China: Murder Map, Translation, and Venturing Out

In 2009, the UK government launched the *data.gov.uk* beta to make available non-personal UK government data as open data. As two professors from the Department of Computer Science at the University of Southampton were invited to consult the project, their colleagues started to *play* with the open government data to *experiment* with different application demonstrations. One of these demonstrations was a live crime map in Southampton, using current data from the Southampton Crime and Safety Statistics, with which the colleagues discovered a recent murder that took place in a neighbourhood close to the university. This discovery had not only left Gao Feng, a Chinese PhD student who just started his project on changing people's food behaviour using data driven approach, with a different impression of the Southampton city, but also a discovery of the value of open government data, which was not so obvious to him as a citizen.

Three years later, as Gao Feng awaited his PhD defence and *idled* around on the Internet, the idea of open government data “popped back up” and prompted an internet search. He found the open definition webpage (<https://opendefinition.org/>) by the Open Knowledge Foundation, where they defined what it means to be open in open data, open content, and open knowledge. As he saw the translation of the open definition in traditional Chinese, Gao Feng wrote an email to the OKF asking if they had a contact or knew any open development in China. But there was nothing on China from the OKF. One thing the OKF did suggest was if Gao Feng would be willing to volunteer to *translate* the Open Definition into simplified Chinese. They also mentioned an initiative that was about to start at the beginning of 2013 – the OKF ambassador programme. A year later, Gao Feng applied for and became the OKF ambassador in Shanghai, together with Xie Biao in Guangzhou. In 2014, Cui Anyong from Beijing also became an OKF ambassador.

The translation of the open government data movement from the UK quite literally took off from these idling activities through the Chinese translation of Open Definition. In Gao Feng’s personal account, these initial encounters with open government data were permeated with surprises and spontaneity. Rather than having a clear goal for engaging with open government data, Gao Feng’s primary motivations were “to have fun” and “to experiment” in his spare time. Nonetheless, what is worth noting here is that at this moment, he is not a standalone mediator that exercises his agency in translating open data. Rather, he is embedded in and enabled by an academic network that is connected to government consultants and established figures in open data movements. His agency is distributed across academic networks, transcending the boundary between policy, entrepreneurship, and research.

Meanwhile, in 2011, the Shanghai government pioneered in China’s exploration of open data by initiating the research project “*Accelerating the Opening of Public Information Resources to the Society and Promoting the Development of the Information Service Industry.*” Through the project, the Shanghai government established the necessity, urgency, and feasibility of open data initiatives and decided that open data initiatives would be led by the Shanghai Commission of Economy and Informatization (SHEITC) and the Department of Government Information Disclosure (DGID) in the General Office of the Shanghai Municipal People’s Government.

In June 2012, the Shanghai government launched the first data portal in China – *datashanghai.gov.cn* – which included open data from nine municipal bureaus, including the Municipal Public Security Bureau, Municipal Planning and Land Resources Administration Bureau, and Municipal Transportation Commission. The launch of *datashanghai.gov.cn* was immediately followed by a new research project carried out by the Shanghai Science and Technology Commission, which resulted in the “*Shanghai Three-year Action Plan for Promoting Big Data Research and Development (2013-2015)*” (hereafter:

three-year action plan). The three-year action plan pointed out that the development of big data in Shanghai was to “drive innovation, [economic] transformation and development” with companies being the primary subject of innovation.

Together with the data portal *datashanghai.gov.cn*, the three-year action plan is an initial mapping of relevant authorities and data sources in the eyes of Shanghai government. The three-year action plan showcased a strong focus on economic returns and the effectiveness of public service in open government data, as well as a strong impetus to organize the data sources within the Shanghai government. As it happens, a civil servant who worked for the Shanghai government for years on publishing information and data, Zhang Baijun, left for the UK for a master programme in 2012. He would later, upon his return to China, meet with Gao Feng and jointly plan on how to approach open data in Shanghai in a new direction.

On the Road from/to China: Experiment, Failure, and Rebirth

Between 2012 and 2014, both Gao Feng, as the ambassador of OKF, and the Shanghai Municipality started to build open data initiatives in China, respectively. While Gao Feng ventured out to build online communities, SHEITC embarked on organizing a contest on the application of big data. Nonetheless, both encountered barriers that led to their understanding of local needs, or a lack thereof.

In Gao Feng’s return to China as the ambassador of OKF in 2012, the first barrier he ran into was how to address the blank slate on open knowledge and open data in China. Initially, Gao Feng started with establishing a Weibo account – a popular Chinese social media service (microblog) at the time, for OKF, where he translated and shared the latest cases and research articles. Gao Feng’s choice of social media for knowledge sharing was inspired by his own experiences in OKF where he was working with a network of researchers and practitioners; in their discussion on open knowledge, they co-produced blog articles on open knowledge and open data that were well-received internationally.

Through running OKF’s Weibo account, Gao Feng gradually built up a network of “friends who shared the same idea” on open knowledge, which ranged from librarians who were committed to open librarian resources to University FabLab, which focuses on open design. Nonetheless, through these online exchanges, Gao Feng realized that although there is a shared interest in open knowledge across the network, divergent professional interests made it difficult to find a common focus in these discussions.

In autumn 2014, following the three-year action plan, SHEITC and other municipal departments started to experiment with the possibilities of open government data through the “Shanghai Big Data Development Innovation Contest,” which asked interested individuals and organizations to come up

with ideas of big-data-based applications. The goal of the contest was to showcase the added values of government data through myriad application possibilities, driving government agencies to open their data. However, the contest ended with few participants, and the champions of the contest never gained access to the government data needed to realize their prototype. Despite the leadership's will in the Shanghai government to engage with open data, it was difficult to operationalize open data that catered to the interests of local data sources.

At this moment, the first open data initiatives built by Gao Feng – arriving from the UK and by SHEITC, sprouting from the local government of Shanghai – ran into a shared dilemma: a lack of local, common understanding on open data among both the expert enthusiasts and government agencies. Following this reflection, Gao Feng shifted his strategy in his way of advocating for open data. In 2014, Gao Feng established a non-profit organization, Open Data China, narrowing his initial focus on the sharing and use of data across professional fields to persuading local governments to release their datasets and creating open data platforms.

At the end of 2014, funded by the World Bank, Gao Feng organized a forum on open data with a friend and a colleague he met over Weibo – the head of the Lab for Mobile Governance at Fudan University in Shanghai. In the forum, they invited open data advocates from Houston and Taiwan and experts such as Joel Gurin, the author of *Open Data Now*, to share their local experiences. It was also in this forum that the management from SHEITC, who were seeking for ways to operationalize open data; researchers from local universities; and companies who were seeking for data to boost their product development met and became friends through their shared interests in open data. In this sense, the open data forum in 2014 was a key offline event that connected Gao Feng with a diverse range of key actors from public, private, and research institutes.

Arrival: SODA, Qinghuai, and WeChat

After the open data forum, one of the participants, Zhang Baijun – the former SHEITC employee, then Vice CEO of a state-owned enterprise, Chinese Industrial Design Institute (CIDI) Shanghai – started to embark on a project to localize open data in Shanghai. Around early 2015, neither public nor private actors were clear about what the scope or goals should be for such a project. For Zhang, it was important to ensure it was the “right” group of people that were on this initiative – people who shared a similar mindset around open government data and who also possessed relevant resources and capacities. The open data forum, alongside his own networks, was one place for Zhang to scout for people who were interested in such an initiative.

Through initial contacts, Zhang gathered a group of actors from his networks, including Gao Feng. These actors were affiliated with a range of

organizations, including leaders of the informatization branch in the municipal government, researchers and lab managers from local universities, CEOs of IT companies, IT start-ups, and NGOs.

Rather than engaging with open data in a professional capacity, these actors appeared to have a shared disposition that open government data related work is “fun,” which counters the imagery of serious, arduous, professional data work. In their work with open government data, they emphasized they are driven by affect and passion, be it idealism or intellectualism, rather than career goals. They were keen on breaking away from professional affiliations and embracing a crowd mentality when it came to ideating the project. These actors considered themselves as a voluntary interest group and emphasized they were driven by a shared “Qinghuai” – a personal passion to do good, rather than realizing professional goals – through open government data. They considered sharing a common “Qinghuai” helped them to form a “friend-like” bond amongst each other, rather than building their collaboration based on policy mandate or economic gains. For them, working with open data involved “fun” activities, such as chatting casually online or sharing experiences over a communal soup dinner, which countered what had been perceived as professional expectations.

This disposition of fun materialized into various practices that are intended to grant an experience of buoyancy and relatedness. For instance, the head of the DMG Lab at Fudan University started a regular workshop, “Yan Du Xian,” where he would bring in three speakers from different generations (born in the 1970s, 1980s, and 1990s) or perspectives to talk about the data, platforms, or internet services with which they work. The event always begins with the three speakers making a local soup “Yan Du Xian” together, each representing the three ingredients: bamboo shoots, fresh pork, and preserved meat. The soup simmers as the speakers present and discuss among different perspectives. As the discussion approaches the end, the audience shares a well-cooked soup that represents the integration of different perspectives.

Out of these fun activities, the idea of the Shanghai Open Data Applications (SODA) contest emerged at the beginning of 2015. When Gao Feng met Zhang in 2015, Zhang was considering starting a “social experiment” on open government through the form of a data-based application contest. The idea of the SODA contest was that the citizens could use government data to create their own public service applications to fill in a gap they saw in the current public services, which would make visible the value of open government data and persuade local municipal bureaus to release their data. The organizing model was partly drawn from ODI’s Open Data Challenge contest series between 2012 and 2015. The idea was to use the contest as a mechanism to stimulate data application ideas and to localize the application scenarios.

While the name SODA is a beautiful analogy and wish for the explosive effects of data once it is released from the bottle of government, to realize this goal it requires data sources and networks of “people who actually needed data,” neither of which was in place at the time in China. For instance, due to the lack of local data forums or communities, SODA organizers, including Gao Feng, had to recruit the contestants through their own friend circles, such as the community Gao Feng built through the OKF ambassador’s account.

From Gao Feng’s point of view, the lack of data sources and visibility of data enthusiasts in China made it difficult to fully adopt the model of an open data contest from the UK as there were more data sources available in that context. Given open government data was not systematically implemented in Shanghai, local government agencies lacked motivations to become SODA data providers at the time. One of the biggest issues at the time was how to motivate local governments to release their data. Through discussions with his previous employer at the SHEITC, Zhang proposed a semi-open, sandbox approach to open government data: the data providers give fragments of desensitized historical data, with the contestants’ agreement to not to leak or to redistribute the provided data. The organizers especially focused on transportation data (e.g., bus and taxi routes and speed tracking data) in 2015, based on the consideration that transportation data is less likely to have privacy issues and the positive outcome when Transport for London opened their data and attracted 500 application ideas.

To keep the experimental nature of a contest, the SODA organizers did not use public funding in 2015 but sought for private sponsorship. They were also open about their workstyles. For instance, instead of having regular work meetings following the government work traditions, they opened a chat group on WeChat – a popular online messaging application in China. The group was initially titled “open data advocates,” and only consisted of several initial organizers that Zhang found through his own network. Participants could share their thoughts and experiences about open government data. Some of the public actors particularly remarked on the informal chats and energetic responses in the WeChat group, which was notably distinctive from the “all meetings no actions” working norms in the management style of conventional public procurement projects.

Finding the Next Destination: ODI or Elsewhere...

The first SODA yielded record high participants (i.e., more than 800 teams) and prototype applications. As a result, local municipal governments became increasingly interested in opening their datasets to the public, and the scope of organizers has grown in scale as SODA turned out to be a media sensation in 2015.

Gao Feng started to reach out to international partners. In 2016, he reached out to ODI. He chose ODI partly because of his previous education in the University of Southampton with which ODI has a “deeper connection.” Subsequently, he felt he had a special affinity with ODI that compelled him to seek for collaboration. But more importantly, for him, ODI have authorities and are rich with resources and experiences in the field of open data. In his own words, the reason he chose ODI was because it was “pretty much the only organization with the right expertise on earth.”

Nonetheless, it took some convincing for ODI to arrive in China. One of the primary reasons was because of the non-profit nature of ODI and their difficulties in assessing the potential output of their investment in China due to uncertainties in political, legal, and social differences. Coincidentally, ODI was taking a field trip to Malaysia in 2016. With the help of the British embassy, ODI came and visited China in the same trip. Based on this incident, Gao Feng has reflected on his communication strategy with international organizations such as ODI. He thought his initial strategy to seek for help may be too pessimistic in the sense that China may have been perceived as “a grim political climate that has slim hope for open data development.” Later, Gao Feng considered portraying China in a more optimistic tone as a promising land of opportunities for open data for entrepreneurship, which he believes may attract more interest from international organizations.

Meanwhile, new domestic stakeholders such as district governments, incubators, and investors have also joined SODA in subsequent years. Soon enough, the local district municipalities started to take over the project from the originally diverse range of stakeholders. The tug of war took place between 2016–2018, with a few new government actors on the one side, and the initial actors from government, NGOs, universities, and the private sectors on the other. The initial actors put up a fight by establishing two companies to operate the contest separately and selling open data contests as an open government data service to other interested cities. Nonetheless, in 2019, the Shanghai Municipality took over the organization of the contest entirely and it has since then become a fully government-driven project. Around the same time, 46 other municipal governments established open data portals.

By 2022, the idea of open data had been burgeoning in China for 10 years. Looking at one of the products of the movements, SODA, Gao Feng thought “it failed as a social experiment, as it didn’t realize the complete form of openness. It never really managed to migrate out of the ‘half-closed’ test mode to a full open mode where citizens can utilize the government datasets freely.” But in his eyes, it also had its own success, as it did gain trust from the local municipal governments on the concept of open data, and it created annual test opportunities for citizens. On a personal note, he also started to reflect on the extent of control there can be when it comes to the local adoption of a global concept such as open data.

Reviewing the trajectory the open government data movement has taken in China, Gao Feng at the time thought the concept of open data “did not manage to develop its own characteristics. There is too strong of an economic incentive. Lots of attention has been given to data exchange”; “the current attitude of local government is ‘it depends on you.’” In Gao Feng’s view, the local government broadened the definition of openness, so “as long as your datasets are not completely closed, it is fine. That means some datasets are dark or even gray.” Thinking about what the main differences between the working concept of open data are in 2013 (influenced by the UK) and 2021 (materialized in local practices in Shanghai), Gao Feng thought the concept of open data, after years of local translation, had lost the “spirit of openness” and went from “participation, engagement and transparency” to “open data simply as an activity to make data accessible.” Such frustration also revealed the struggle that may have come with the personal approach in driving the open government data movement, especially when it comes to the possibilities of conveying criticism to local government’s engagement of open government data. Local actors’ ideas of open government data are inevitably embedded in the network of people that they have explored it with. For instance, for a private actor who has had years of work experiences in municipalities and used his previous professional network to mobilize the resources needed for the movement, what he considers as an appropriate extent of openness, i.e., semi-open, is largely so taking into preferences of the local municipal governments. A similar case can also be made about researchers, who after years of collaboration with local municipal governments, had to keep “subtle” distance with government actors. These interpersonal connections with government officials made it difficult to criticize the state or local municipal’s approach to open government data, as many of them have been keen collaborators in the local exploration of the movement.

6. Concluding Remarks

In this paper, we have followed the journey of open government data and how it travelled among the UK and China through a group of expert enthusiasts to understand the socio-historical conditions in which digital(ized) social change occurs. On the outlook, it seems like the introduction of open government data to China is led by figureheads like the OKF ambassador Gao Feng and a few other elite stakeholders in the private and public sectors and prompted by sudden policy imperative from the central state that advocates for nuanced but also similar ideas like the ones from the UK government. A closer scrutiny, however, shows heterogenous operationalization of the open government data concept, where open government data is interpreted and

acted upon differently across different local contexts and at different points in time.

Our findings give rise to an alternative view of ordering socio-historical conditions around open government data as digital(ized) social change. We suggest social change around digitalization is a process that is not necessarily driven by rational choices, or its appeal as a universal solution strategy for democracy, but affective atmospheres like fun. These affective atmospheres are important for driving changes around digital information as they motivate actors to be constantly inquisitive about the “digital” and the chemistry it has with the society that embeds it. In this way, digital social change is not always mediated by professionally driven, elite figureheads and policy initiatives, but instead by expert enthusiasts that are attracted to the fun “aura” around the digital phenomenon; social change around digitalization consists of multi-directional processes that are built upon the reflections on the evolving relationships between the perceived centres and peripheries. In the case of open government data, this means that the fun “aura” guides the network of actors in their identification of what the relevant local contexts to introduce change are, and the way change should be enacted and sustained.

Drawing on Behrends, Park, and Rottenburg’s (2014) view on idea traveling, our first contribution is on how different approaches to open government data are enacted in practice and travel across different sites of the globe.

Looking at the operationalized open government data definitions and initiatives in China and the UK today, their foci seem to resonate with each other, and the three identified archetype approaches in the existing research (e.g., Gil-Garcia, Gasco-Hernandez, and Pardo 2020), including public service and data management, public participation, and data infrastructure for entrepreneurship in the past decade. But it may still come across as a myth as to how these different approaches become possible in China, a country long regarded by outsiders as “the epitome of a closed, authoritarian and secretive state” (Xiao and Snell 2007, 44).

Following the local actors’ journeys, it has become clear that the local open government data movement is *not* a carbon copy of the movement in the UK. Rather, it is built upon local actors’ continuous experiments with different approaches to find a mix that caters to the local socio-economic conditions. For instance, Gao Feng’s initial attempt to build an open data community that empowers citizens (Lathrop and Ruma 2010; Meijer, Curtin, and Hillebrandt 2012) upon his return to China in 2014 did not yield any meaningful engagement with the government. Similarly, Shanghai Municipality’s ambition to utilize government data for entrepreneurship also did not materialize around the time. However, a later experiment with the SODA contest shows that the improvement of public service is an important drive for engaging local governments to release their datasets. Building on this focus on public service and data management, Gao Feng and the Shanghai Municipality could then

continue to develop their ambition on citizen empowerment and entrepreneurship.

Our findings also show that the actual form of open government data that emerged from the local context is contingent on the involvement of the actors that participated in the movement. To understand such contingency, it is key to reconsider the *mediators* in the travelling of the open government data concept. It is particularly important to disaggregate actors such as the “state” to identify the often-conflicting preferences of different individuals and groups that constitute a seemingly unitary category. For example, the Shanghai municipality’s participation in the SODA event in 2015 has to do with one of its former employees – Zhang’s initiative to identify both non-government actors such as Gao Feng and government employees who are on board with building an open data infrastructure. Understanding these individual’s journeys provides an alternative route to unfold evolution of the movement.

Following the modernist or diffusionist view of idea travelling, one might also suggest the open data movement is driven by purposeful planning from cultural centres to peripheries. On the outlook, the travelling of open government data movement seems to speak to such views, with the OKF sending ambassadors to drive changes in China around government data following a unifying open definition. Following one of the ambassadors’ journeys, and his encounters with the locally-grown government initiatives sought for open government data, our findings show that these processes do not always necessarily follow rational choices and strategic planning. Rather, these journeys are guided by unexpected “auras” of unfamiliar technologies and filled with “eureka moments” that emerged from individuals’ explorations. These moments give new meanings to the definition of open government data, and subsequently reconfigure the centre-periphery relationship between the ODI and OKF in the UK and the local open government data network in China.

In Gao Feng’s first encounter with open government data, he was not drawn to the concept as an open government or big data initiative, but rather it was the demonstration of a live crime map from an open data source that gave compelling insights on murders in his Southampton neighbourhood. His subsequent engagement with OKF centred around “eureka moments” and idle activities on the Internet, far removed from the imaginary of diplomatic work around data that is well-concerted, serious, and professionally driven in the media or in our assumptions at the time. Similarly, through the introduction of an unexpected yet relatable ingredient – soup, in a tech workshop – local university actors in Shanghai also attracted audiences who may have been foreign to the concept through seemingly irrelevant activities that have more to do with cooking than data.

We argue that in ordering socio-historical conditions around global technology movements, there is a need to pay attention to the arrival of “eureka” moments, as what drives the actors’ persistent engagement may not always

be clearly laid out as professional gains at the beginning. It is, however, the “aura” around the digital phenomenon – sometimes the aura also presents itself in the form of murder or soup – that guides the actors’ enthusiasm and commitment in the first place. In our case, the discourses around data do not always promise objectivity, truth, and accuracy (Boyd and Crawford 2012). Rather they vouch for a relatable, idealistic, and somewhat romantic imaginary of data through activities that attract actors and motivate their continuous commitment with data.

In this case, these auras not only guided the Chinese actors’ commitment to the open government data movement. The strategic manipulation of the auras of the local open government data movement also shaped how the ODI – a perceived centre of open government data movement – engaged with the movement in China. As Gao Feng adjusts his depiction of China from “a grim political climate that has slim hope for open data development” to a promising land of opportunities for entrepreneurship, the aura of the local movement in China also starts to pull the ODI’s work into its own framing.

Second, our findings contribute to the social constructivist view of technology by providing a more in-depth account of the role of technical experts in shaping the meanings and local implementation of open government data. In our case, the initial participation of technical experts is driven by personal interest and affect instead of cold, emotionless calculation of “statistical probability of harm” (Yearley 2001, 13361, cited in Bijker 2006). Such affect and fun-based involvement make a technical expert an *expert enthusiast*, that is an actor who has enough expertise and knowledge to contribute meaningfully to an area but is not engaged in this area of expertise as a professional; in plain terms, they are an expert volunteer.

From our empirical materials, we can see that the actors involved in the exchanges of open data knowledge and expertise between the UK and China do not necessarily consider themselves to be professionals in this space. Rather, we observe that the knowledge exchange was shared amongst enthusiasts who wanted to see open government data initiatives operate in their own locations. The role of “expert enthusiasts” as we called them, in this case, are pivotal in bringing the idea of open government data from the outset and tailoring it to local conditions and interests. Rather than open government data activities being developed by the figureheads of the movement, it is those who want to see what open government data can do – whether that be through murder maps in Southampton or live transport data in the North of England or China – that do the work of defining the potential of open government data through a series of visualizations, hackathons, and communal soup dinners. In short, open government data travels through its doing rather than systematic diplomacy attempts. In this way, the direction of the social change taking place around open government data is not a diffusion from the figureheads in the UK to the local followers in China following the map laid out in a

manifesto. Rather, it is a multi-directional process, where the view of change and how it should take place is constantly contested and negotiated by the local enthusiasts who redefine the potential of open government data through their work.

In terms of future research, our article indicates a method of paying attention to the more grassroots methods of digitalization in public spaces. Through this article, we want to articulate and emphasize the roles that fun and enthusiasm have alongside the strategic interests of figureheads who often speak on behalf of organizations on a public level. We also want to reiterate that these roles are by no means static; some expert enthusiasts go on to become figureheads, as is evidenced in the example of developing a community around open government data in China. By paying attention to the histories of expert enthusiasts rather than figureheads, we are given a rich insight into the practicalities and non-linear ways that ideas spread and flourish from one local context to another. We see the case presented in this article as a contribution towards and an instigation of incorporating more grassroots accounts into narratives of innovations and the transfer of ideas in digitalization.

References

- Altayar, Mohammed Saleh. 2018. Motivations for Open Data Adoption: An Institutional Theory Perspective. *Government Information Quarterly* 35 (4): 633-643.
- Bates, Jo. 2014. The Strategic Importance of Information Policy for the Contemporary Neoliberal State: The Case of Open Government Data in the United Kingdom. *Government Information Quarterly* 31 (3): 388-395.
- Behrends, Andrea, Sung-Joon Park, and Richard Rottenburg. 2014. Travelling Models: Introducing an Analytical Concept to Globalisation Studies. In *Travelling Models in African Conflict Management*, 1-40. Brill.
- Bijker, Wiebe E. 2006. *Why and How Technology Matters*. Oxford University Press. doi: [10.1093/oxfordhb/9780199270439.003.0037](https://doi.org/10.1093/oxfordhb/9780199270439.003.0037).
- Boyd, Danah, and Kate Crawford. 2012. Critical Questions for Big Data. *Information, Communication & Society* 15 (5): 662-679. doi: [10.1080/1369118X.2012.678878](https://doi.org/10.1080/1369118X.2012.678878).
- ChinaOpenDataIndex.cn. 2020. China Open Data Index - Application Cases [中国开放数据指数网]. <http://4cool.ifopendata.cn/case> (Accessed October 25, 2022).
- Chinese National Bureau of Statistics. 2021. The Response of the National Bureau of Statistics Press Office on Several Issues Concerned by Netizens. May 12. http://www.stats.gov.cn/tjsj/zxfb/202105/t20210512_1817360.html (Accessed October 25, 2022).
- Citymapper. 2021. Citymapper - The Ultimate Transport App. *Citymapper*. <https://citymapper.com/copenhagen?lang=en> (Accessed December 19, 2021).

- Czarniawska, Barbara, and Bernward Joerges. 1996. Travel of Ideas. In *Translating Organizational Change*, ed. Barbara Czarniawska and Guje Sevón, 56: 13-48. New York: Walter de Gruyter.
- Diani, Mario. 1992. The Concept of Social Movement. *The Sociological Review* 40 (1): 1-25. doi: 10.1111/j.1467-954X.1992.tb02943.x.
- Eriksen, Thomas Hylland. 1991. WALLS: VANISHING BOUNDARIES OF SOCIAL ANTHROPOLOGY. Trial lecture for Dr. Polit. degree (chosen topic).
- Forth, Tom. 2021. Bus Use Data. <https://www.tomforth.co.uk/busdata/> (Accessed August 11, 2021).
- Fudan DMG. 2021a. China Open Data Index (City Level) 2021 [中国地方政府数据开放报告（城市）2021年度]. <http://www.ifopendata.cn/static/report/中国地方政府数据开放报告（城市）.pdf> (Accessed October 25, 2022).
- Fudan DMG. 2021b. China Open Data Index (City Level) 2021 Jan - June [中国地方政府数据开放报告（指标体系与省域标杆）2021 上半年]. <http://www.ifopendata.cn/static/report/%E4%B8%AD%E5%9B%BD%E5%9C%B0%E6%96%B9%E6%94%BF%E5%BA%9C%E6%95%B0%E6%8D%AE%E5%BC%80%E6%94%BE%E6%8A%A5%E5%91%8A%EF%BC%88%E6%8C%87%E6%A0%87%E4%BD%93%E7%B3%BB%E4%B8%8E%E5%9F%8E%E5%B8%82%E6%A0%87%E6%9D%86%EF%BC%89.pdf> (Accessed October 25, 2022).
- Fudan DMG. 2021c. China Open Data Index (Provincial Level) 2021 Jan - June [中国地方政府数据开放报告（指标体系与省域标杆）2021 上半年]. <http://www.ifopendata.cn/static/report/中国地方政府数据开放报告（指标体系与省域标杆）.pdf> (Accessed October 25, 2022).
- Gao, Feng. 2018. Driving Urban Innovation with Open Data: The Birth of the Shanghai Model. *Paris Innovation Review*. May 7. <http://parisinnovationreview.com/articles-en/driving-urban-innovation-with-open-data-the-birth-of-the-shanghai-model> (Accessed December 31, 2021).
- Gao, Yingying, Marijn Janssen, and Congcong Zhang. 2021. Understanding the Evolution of Open Government Data Research: Towards Open Data Sustainability and Smartness. *International Review of Administrative Sciences*.
- Gil-Garcia, J. Ramon, Mila Gasco-Hernandez, and Theresa A. Pardo. 2020. Beyond Transparency, Participation, and Collaboration? A Reflection on the Dimensions of Open Government. *Public Performance & Management Review* 43 (3): 483-502.
- Gonzalez-Zapata, Felipe, and Richard Heeks. 2015. The Multiple Meanings of Open Government Data: Understanding Different Stakeholders and Their Perspectives. *Government Information Quarterly* 32 (4): 441-452. doi: 10.1016/j.giq.2015.09.001.
- Gray, Jonathan, Carolin Gerlitz, and Liliana Bounegru. 2018. Data Infrastructure Literacy. *Big Data & Society* 5 (2). doi: 10.1177/2053951718786316.
- Great Britain Cabinet Office. 2012. Open Data White Paper: Unleashing the Potential. The Stationery Office.
- Janssen, Katleen. 2012. Open Government Data and the Right to Information: Opportunities and Obstacles. *The Journal of Community Informatics* 8 (2).
- Janssen, Marijn, Yannis Charalabidis, and Anneke Zuiderwijk. 2012. Benefits, Adoption Barriers and Myths of Open Data and Open Government. *Information Systems Management* 29 (4): 258-268.
- Kalampokis, Evangelos, Efthimios Tambouris, and Konstantinos Tarabanis. 2011. Open Government Data: A Stage Model. In *Electronic Government: Proceedings of the 10th IFIP WG 8.5 International Conference, EGOV 2011*, ed.

- Marijn Janssen, Hans J. Scholl, Maria A. Wimmer and Yao-hua Tan, 6846: 235-246. Lecture Notes in Computer Science. Delft, The Netherlands.
- Lathrop, Daniel, and Laurel Ruma. 2010. *Open Government: Collaboration, Transparency, and Participation in Practice*. O'Reilly Media, Inc.
- Macaulay, Tom, and Charlotte Trueman. 2019. How the UK Government Uses Open Data. *Computerworld*. August 14. <https://www.computerworld.com/article/3427838/what-is-the-uk-government-s-open-data-strategy.html> (Accessed October 25, 2022).
- Maurice R. Greenberg World Fellows Program. 2022. Feng Gao. *Maurice R. Greenberg World Fellows Program*. <https://worldfellows.yale.edu/person/feng-gao/> (Accessed September 13, 2022).
- Maxwell, Liam, Jerry Fishenden, Mark Thompson, William Heath, Peter Rowlin, Jonathan Sowler, and Simon Wardley. 2010. *Better for Less: How to Make Government IT Deliver Savings*. London: Network for the Post-Bureaucratic Age. <https://docs.google.com/fileview?id=0B3rcaHmLSeHBMDE1MTIzN2QtMjVhMy00YWRjLTgzODQtMdc2MmExNjBiMTQ5&hl=en> (Accessed October 25, 2022).
- Meijer, Albert J., Deirdre Curtin, and Maarten Hillebrandt. 2012. Open Government: Connecting Vision and Voice. *International Review of Administrative Sciences* 78 (1): 10-29. doi: 10.1177/0020852311429533.
- Meijer, Albert. 2014. Transparency. In *The Oxford Handbook of Public Accountability*. doi: 10.1093/oxfordhb/9780199641253.013.0043.
- Meijer, Albert. 2015. Government Transparency in Historical Perspective: From the Ancient Regime to Open Data in The Netherlands. *International Journal of Public Administration* 38 (3): 189-199. doi: 10.1080/01900692.2014.934837.
- Mintzberg, Henry. 1971. Managerial Work: Analysis from Observation. *Management Science* 18 (2). doi: 10.1287/mnsc.18.2.B97.
- Nielsen, Jeppe Agger, Lars Mathiassen, and Sue Newell. 2021. Multidirectional Idea Travelling Across an Organizational Field. *Organization Studies*. doi: 10.1177/0170840621998566.
- okfn.org. 2022. The Mission of the Open Knowledge Foundation. <https://okfn.org> (Accessed October 25, 2022).
- Open Data Institute. 2015. Open Data Means Business: UK Innovation across Sectors and Regions. May 31. <https://theodi.org/article/open-data-means-business/> (Accessed October 25, 2022).
- Opendatachina.org. 2021a. Case Study: The Development of Shanghai Open Data [案例：上海开放数据发展]. <https://report.opendatachina.org/untitled-1/an-li-shang-hai-kai-fang-shu-ju-fa-zhan> (Accessed December 19, 2021).
- Opendatachina.org. 2021b. Overview of Open Data in China [中国开放数据发展概览]. <https://report.opendatachina.org/untitled-1/zhong-guo-kai-fang-shu-ju-fa-zhan-gai-lan> (Accessed December 19, 2021).
- Otjacques, Benoît, Patrik Hitzelberger, and Fernand Feltz. 2007. Interoperability of E-Government Information Systems: Issues of Identification and Data Sharing. *Journal of Management Information Systems* 23 (4): 29-51.
- Qiang, Christine Zhen-Wei. 2007. *China's Information Revolution: Managing the Economic and Social Transformation*. Washington, D.C: World Bank.
- Raman, Bhuvanawari. 2012. The Rhetoric and Reality of Transparency: Transparent Information, Opaque City Spaces and the Empowerment Question. *The Journal of Community Informatics* 8 (2): 1-12.
- Ross, Eleanor. 2015. Why Open Data Doesn't Mean Open Government. *The Guardian*, December 2, sec. Media Network. <http://www.theguardian.com/>

- [media-network/2015/dec/02/china-russia-open-data-open-government](#) (Accessed October 25, 2022).
- Rostow, Walt Whitman. 1990. *The Stages of Economic Growth: A Non-Communist Manifesto*. Cambridge university press.
- Ruppert, Evelyn, Engin Isin, and Didier Bigo. 2017. Data Politics. *Big Data & Society* 4 (2). doi: [10.1177/2053951717717749](https://doi.org/10.1177/2053951717717749).
- Schumpeter, Joseph A. 1942. *Capitalism, Socialism and Democracy*. New York, London: Harper and Brothers.
- The National People's Congress of the People's Republic China. 2021. Data Security Law of the People's Republic of China. <http://www.npc.gov.cn/englishnpc/c23934/202112/1abd8829788946ecab270e469b13c39c.shtml> (Accessed October 25, 2022).
- The State Council of the People's Republic of China. 2015. Premier Li Keqiang and Internet Plus. December 31. http://english.gov.cn/policies/infographics/2015/12/31/content_281475263938767.htm (Accessed October 25, 2022).
- theodi.org. 2021. Press and Media – The ODI. <https://theodi.org/about-the-odi/contact-us/press-and-media/> (Accessed October 25, 2022).
- Transport for London. 2021. Open Data Users. *Transport for London*. <https://www.tfl.gov.uk/info-for/open-data-users/> (Accessed August 10, 2021).
- Turner, Ralph H., and Lewis M. Killian. 1987. *Collective Behavior*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Wang, Cancan, and Kalina Staykova. 2019. Decoupling Accountability and Liability: Case Study on the Interim Measures for the Opening of Public Data in Shanghai. *Naveiñ Reet: Nordic Journal of Law and Social Research* 9: 275-298.
- Xiao, Weibing, and Rick Snell. 2007. Freedom of Information Returns to China. *Public Administration Today* 10: 44-47.
- Yearley, Steven. 2001. Sociology and Politics of Risk. In *International Encyclopedia of the Social and Behavioral Sciences*, ed. Neil.J. Smelser and Paul B. Baltes, 13360-64. Oxford: Pergamon.
- Yu, Harlan, and David G. Robinson. 2011. The New Ambiguity of Open Government. *UCLA Law Review Discourse* 59: 178-208.
- Zuiderwijk, Anneke, and Marijn Janssen. 2014. Open Data Policies, Their Implementation and Impact: A Framework for Comparison. *Government Information Quarterly* 31 (1): 17-29.

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