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The Impact of Open Data in the UK: Complex, Unpredictable and Political

This article examines the democratic impact of the UK Coalition Government's Transparency Agenda, focusing on the publication of local government spending data as the first steps in an evolving 'ecology' of Open Data transparency. It looks at whether the Open Data has driven accountability, participation and information transmission. Rather than forging new 'performance regimes' or bringing mass use and involvement, the publication of spending data adds a further element of political 'turbulence' that can 'punctuate' the 'equilibrium' of local politics (Hale et al 2013).

The evidence finds that the spending data, so far, has driven some accountability but less participation or information transmission. Taken together, assessment of the three objectives reveals that the use and impact Open Data is far more complex, more unpredictable and more political than the rhetoric around Open Data indicates. The danger is that the gap between aims and impact invites disappointment from supporters.

Open Data is a highly 'symbolic' policy that signals a government's commitment to the universal benefits of transparency, accountability and participation. The discourse is imbued with the idea of technology as a tool of political empowerment, a pan-political and universal idea (Edelman 1985: Birchall 2011). The paradox is that a policy bringing universal benefits is having an uneven, variable and fragmented effect. There have been successes but also conspicuous failures (Peled 2011: Chadwick 2011: Margetts 2013).

Literature Review

Open Data concerns the 're-use' of information, combining the power of technology and the knowledge provided by data (Interview). It means publishing 'government data in a reusable form' (Huijboon and Van den Broek 2011, 5-6; 1). The idea remains 'deeply ambiguous' (Yu and Harlan 2012 181: **Barry and Connolly 2014**). It combines the 'technology of machine readability and the philosophy of participation' and 'blurr[es] the distinction between the technology of Open Data and the politics of Open Government' (202: 181). Discussion is often underpinned by a technological determinism (Goldfinch et al 2010, 185). The goals are shaped by very particular political assumptions, namely that 'information transmission' empowers and motivates individuals to then 'examine political positions and register choices' (Dahlberg 2011, 858-59). In the UK, the 'neutral' technology may hide a highly ideological, neo-liberal view of state-society relations, imbued with 'neo-liberalism and marketisation' (Longo 2011: Birchall 2011: Margetts 2013, 170-171).

Empirically, Open Data research is in its infancy with 'little systematic and structured research' (Janssen et al 2012, 262: Davies and Bawa 2012). Assessment is complicated by disagreement over whether transparency policies have *direct* or *indirect* effects. Proponents of the *direct* effect argue that 'government and organisations will change their behaviour' presuming that the public are watching 'regardless of whether they do or not' (Meijer et al

2012, 18). Alternately, some believe that such policies only work when used, pointing to lobby registers as an example (Meijer et al 2012, 19).

Open Data in the UK

The UK's coalition government has promised a 'transparency revolution' to create 'an effective Open Data ecosystem' (Cabinet Office 2011, 12). The UK's Transparency Agenda comprises a mix of legal change, codes of practice, recommendations and experiments. It includes online publication of central government spending over £25,000, Treasury spending (called COINs now OSCAR) and local government spending over £500. It has also led to the publishing of contracts, officials' salaries, organograms and organisation charts, as well as the further development of the data portal data.gov.uk. It has driven amendments to the Freedom of Information Act 2000 and a series of experimental platforms, from online crime maps to crowd sourced policy (PASCA 2014, 7: Cabinet Office 2012, 5: Shakespeare 2013, 7). The reforms mix 'high threshold' experiments in deliberation with low-threshold transparency mechanisms. They also mix ideas of 'post-bureaucratic' politics and 'crowd sourcing' with more traditional 'open government' ideas of transparency and accountability (Moss and Coleman 2013).

Open Data and Democracy: Accountability, Participation and Informing

Open Data is rich with symbolic import: a liberating, modern and flexible tool and politicians frame the reforms as instruments of mass participation that will decisively change government. David Cameron spoke of how Open Data, 'by bringing information into the open', will enable the public 'to hold government and public services to account' (Cameron 2010). It would increase public participation and create 'a whole army of effective armchair auditors looking over the books' (Cameron 2010). The Minister in charge of Open Data argued it will create 'empowered citizens' and 'effective personalised 21st century democracy' (PASC 2014). The reforms are central to the coalition government's vision of devolving power to 'wrest power out of the hands of highly paid officials and give it back to the people' (Cabinet Office 2011a, 5). The UK agenda was inspired by innovations in the US (Guardian 2013: Cameron 2010). It was also intended to avoid scandals such as the 2009 MPs' expenses scandal when, after a lengthy struggle, of unredacted MPs' expenses led to a series of resignations and a loss of trust in Parliament as well as a series of reforms including a new independent body to regulate MPs' expenses (Worthy 2014). David Cameron argued at the time that the scandal demonstrated the power of simple information provision to bring about decisive change (**Worthy 2014**). In the case of Open Data, it is hoped a mixture of private and voluntary 'data intermediaries', seeking 'niche positions', would then 'innovate' to create easy to use portals or applications (Mayer-Schonberger and Cukier 2013, 136-137).

Politicians frequently highlight the accountability, participatory and informing or educative benefits of Open Data for the public. Accountability often exists in mutual support with transparency (Meijer 2012). Open Data may enable 'social monitoring', where the 'eyes and ears of citizens' are used to 'spot public problems' as data is published (Fung et al 2012, 11-15). It is hoped that Open Data can create what Nigel Shadbolt has called 'severe performance regimes' to monitor public bodies, combining 'surveillance and 'disciplinary technology' (Margetts 2013, 170: Heald 2003, 753). The new information may widen the 'political information cycle', opening it up to new actors and activists prepared to challenge

and question (Chadwick 2013, 61:64). A number of countries have championed the idea of the 'Armchair Auditor', where the citizen becomes the scrutiniser (Fung et al 2012). Bauhr and Grimes (2014) found some successful examples of 'monitoring' worked only in certain situations.

However, Meijer cites Dror describing transparency as a pharmacon: 'it heals in correct doses and kills when the doses are too high' (2014, 516). A 'neutral medium for the transfer of information' may become a 'highly politicised means for assigning blame' (Flinders and Moon 2011, 654). Monitoring could create an 'illusion of openness' shaped by pre-existing 'negative patterns' of reporting and use (Nam 2012, 91). So-called stimulus trackers such as Recovery.gov in the US 'focus on costs' rather than 'commensurate public benefits', leading to 'more stories of government waste, corruption and failure' (Fung and Weil 2010, 107). Like FOI, it may reinforce negative characteristics, highlighting scandal or 'distrustful' information (Bauhr and Grimes 2014). On the other hand it may become an unused 'shallow veneer' (Margetts 2013, 169).

A second objective of Open Data is to increase participation. Ease of access to information 'lowers the barriers' to involvement and can potentially drive 'high threshold participation', such as online deliberation, and more 'low threshold', less interactive, activities such as signing e-petitions or searching data portals (see Davidson and Elstub 2013: Chadwick 2012, 19). Early research pointed to disappointing results (Chadwick et al 2010). However more recent studies indicate a small but significant effect with ICTs acting as 'catalysts (and, in some cases, enablers) for change in political behaviour' (Tolbert and Mossberger 2012, 218: Boulianne 2009: Nam 2012). Online activity in the US has been linked to increased turnout, campaign contributions and attendance at meetings (Tolbert and Mossberger 2012, 202). While normally associated with political interest, there is also evidence of 'accidental' engagement while 'surfing' (Borge and Cardenal 2011, 11).

The third aim concerns the informing role of Open Data. Easily available data undoubtedly 'reduces the cost of being informed' about services, spending and activity (Borge and Cardenal 2011, 11). It offers potentially both 'background' and 'factual knowledge' (Gibson and McCallister 2011). However, it 'does not necessarily reduce the cost of processing this information' and may further skew existing distributions of political knowledge (Borge and Cardenal 2011, 11: Gibson and McCallister 2011). Moreover, information is rarely interpreted neutrally and even 'non-political' information is 'filtered' by pre-existing 'orientations' or 'predispositions' (James 2011, 401-403: Van De Walle and Ryzin 2011, 1438). Emerging evidence points to transparency in different areas and degrees having different and sometimes counter-intuitive effects on public perceptions (de Fine Licht 2014).

The Use and Impact of Open Data

The rhetoric and aims of Open Data point to a tool of mass-use, with the simplicity of information provision driving large scale political activity and change. It is not clear that all these aims are positive. On a more fundamental level, evidence challenges the mass-use and simplicity. First, there is no 'general user' but a 'diverse population' uses it with 'varied capacities and interests' (Meijer et al 2013, 18). Online experiments point to use and intervention being uneven and sporadic (Chadwick 2013: Hale et al 2013). Karpf (2011) argues that 'the lowered transaction costs of the Internet help to reveal the full demand

curve for public participation' but that 'topics or areas that simply are not particularly attractive or interesting to any existent or nascent issue public will fail to reach critical mass'(340).

Moreover, like transparency more generally, Open Data gives access to very different information (Grimmelikhaujsen et al 2013: Heald 2012). 'Universal' transparency policies actually contain many diverse and 'distinct' forms (Hood 2010: Heald 2012: Meijer 2013: Grimmelikhaujsen and Welch 2012). Depending on use, classic transparency from the 'outside inwards' (public to public body) can sit alongside 'upwards transparency' (where central government 'monitors' local bodies), and macro level 'mapping at high levels of aggregation' can take place in parallel to localised, if not street level, 'micro-level' openness (Heald 2012, 41).

This article argues that Open Data use and impact is both more complex and more political. First, the intent of the users, data itself, the context and tools available for use all shape the impact in manifold ways. Second, the use and impact is political. Many of the 'vanguard' Open Data users are seeking for a political end whether citizens, journalists or NGOs. Even the business use may have, albeit more indirect, political consequences. There is further political complication within the policy itself-varying levels of enthusiasm from central government and between across local government bodies.

Given the complexity and politics, the consequent impact on public bodies is likely to be more nuanced and uncertain. The hopes of widespread direct or indirect impact are based on a tenuous link to either activism or internal behaviour change.

The Impact in the UK

Moss and Coleman (2013) argued that overall the results of the Transparency Agenda in the UK have been 'disappointing' as, despite 'isolated examples of success', they lack a 'clear and coherent strategy' (1). Others have highlighted practicality difficulties with the UK Public Accounts Committee (2012) finding the data itself was inconsistent, 'raw' and 'very difficult to interpret' and the NAO (2012) pointing to varying levels of enthusiasm from the public and public bodies.

Some parts of the reforms have been a notable success: the data.gov.uk portal is heavily used as is the crime map police.uk (Davies 2010: Police.uk 2013). Davies (2010) study of data.gov.uk found users to be mainly overlapping groups of technical experts and social entrepreneurs. The more deliberative government led crowd-sourcing experiments, such as *Spending Challenge* and *Your Freedom*, attracted attention but were limited by abuse and a lack of interaction (Moss and Coleman 2013, 11-12). A review of the Coalition's crowd sourced regulatory review, the 'Red Tape Challenge', concluded that the 'crowd' had little influence (Lodge and Wegrich 2014). The government's e-petitions initiative represents an 'opportunity missed' in failing to engage with the public (Moss and Coleman 2013, 11-12). Despite high profile interest and political support, the design of the system means it has a very low success rate and the link from petition to efficacy is unclear (Hale et al 2013). In democratic terms, most of the more high level initiatives have lacked 'meaningful opportunities to engage', with ill-suited designs and 'sporadic' adoption (Moss and Coleman

2013, 14). Many lack 'feedback loops' than can drive further change or embed policy (Margetts 2013, 169).

More successful have been the UK intermediaries. MySociety's *TheyWorkForYou*, pre-dating Open Data, remains a benchmark as an 'intuitive searchable database' of Parliamentarians. It attracts 200-300,000 users per month, 20 % of whom claim to have been previously unengaged in politics (Escher 2011). Similar innovations include *Openly Local*, which allows users to compare data on 163 local authorities, the *Communities Hub* run by DCLG and the Local Government Association's *LG Inform* that publishes comparable data on local areas and services. Alongside this are numerous small-scale attempts to 'join' up data at individual local authority level (LGA 2012). These 'micro-public' small scale exercises are likely to encourage 'informal' use by civil society and public (Moss and Coleman 2013, 14-15). They fit the 'granular' and 'flexible' approach that can 'disaggregate...tasks of varying magnitude' and allow for 'informational exuberance' and different types of participation (Chadwick 2012, 42-43).

Methods

The UK Public Administration Select Committee (PASC) concluded that 'measuring progress' of the reforms 'is difficult if not impossible', a difficulty that 'allows Open Data supporters to claim the revolution is well underway and the sceptics to say nothing has changed' (2014, 41). The link between transparency and accountability has been described as a 'black box' (Meijer 2014, 507). The problem lies not only in the units of measurement but the interaction between perceptions and 'hard' evidence. Measurement requires understanding use, such as requests made or web views, alongside more intangible changes to culture or behaviour within a particular context (Meijer 2013).

This study combines hard data on use, users and patterns with analysis of perceptions of key groups involved. The research used a mixture of surveys, FOI requests, interviews and media analysis. The online survey asked a series of 10 questions about who was using the data and how, obtaining 102 responses from authorities, approximately 25% of the total number of English authorities. However, the sceptical attitude of some of the respondents towards the reforms (see below) may have shaped some of the answers.

80 FOI requests and informal questions were sent asking for the number of hits on spending site and any information on users and cost. The 70 responses received were variable both in detail and measures-some, for example, offered hits and others pageviews over varying timescales. Stories in the local media were analysed using Lexis and series of 15 interviews were conducted with officials, users and innovators. The research also draws on work by the National Audit Office (2012), the Local Government Association (2012) and assessment by Halonen (2012) and Rowson (2013).

UK Local Government Spending Data

One of the flagship Open Data reforms of the coalition government was commitment for all local government bodies in England (called 'Councils') to publish all their spending over £500 on a monthly basis. By September 2012 all 353 local authorities in England were publishing doing so (LGA 2012). This was enshrined in a Code of Practice on Local Government Transparency in 2012 that was updated and widened in 2014 (DCLG 2011: DCLG 2014). The

government has committed to putting this code on a statutory basis by 2015 (Cabinet Office 2013). The spending fits with a wider set of reforms over council publicity, the publishing of remuneration details and allowing filming and social media in council meetings (House of Commons Library 2014). Spending data is published monthly on the websites of all local councils, often in the ‘democracy’ section in either excel or, less frequently, pdf. They are frequently lists of names of payees with amounts and dates. There is variability on the amount of redaction or detail (Rowson 2013).

Publication would have a range of effects:

Financial disclosure will act as a trigger enabling local taxpayers to see how councils are using public money, shine a spotlight on waste, establish greater accountability and efficiency...and improve access for small and local business and the voluntary sector.

It would also ‘revolutionize local government. Local people should be able to hold politicians and public bodies to account...The swift and simple changes will unleash an army of armchair auditors’(DCLG 2012).

The democratic ‘flavour’ of the commitments is linked to wider changes. Local government in Britain has long been subject to stringent political and financial control (John 2014). The coalition government has sought to reverse this centralising tendency, through ‘localism’ (political empowerment) and the ‘Big Society’ (civic activism) (Lowndes and Pratchett 2012). The reforms include giving authorities greater financial independence and political autonomy and creating new participatory mechanisms including local referenda and community budgeting (Game and Wilson 2011; Flinders and Moon 2012).

Local government should present a favourable environment for Open Data. As the closest level of government to the public it is the one with which they have most interaction (Mossberger 2013, 2). It is also frequently at the forefront of openness and participation experiments: it is, for example, the main focus of FOI requests (Worthy 2013: Game and Wilson 2011). The spending information also potentially fits with the ‘granular’ and small-scale approach (Davidson and Elstub 2013: Chadwick 2012). Yet local government has always been balanced by a ‘dual’ role between democracy and service provision, with the former often ‘subservient’ to the latter (Hepburn 2014, 83)

The article now examines use and impact to date before looking at to what extent the local spending data has enabled accountability, participation and informing.

Who uses Open Data?

Who uses the policy and how is crucial in determining the impact of transparency reforms (Meijer et al 2012). In the survey, 65 % of authorities asked characterised the use of spending data as ‘low’ or ‘very low’ with another 20 % not knowing, pointing to a lack of interest from the wider public.

Table 1: Levels of Use of Local Spend Data (%)

Levels of Use	%
Very Low	38

Low	27
Average	12
High	2
Very High	0
Don't Know	21

Table 2 Pageviews of Spending Data on Selected Local Authority Websites January-December 2012

Council Type	Page Views per month (average)
District	35
District	87
District	99
District	341
Borough	355
District	437
City	450
District	528
District	610
District	636
City	2021

Overall, answers to FOI requests that provided total pageviews ranged from 167 to 10409, with an average of 1616 views since the data was published. However, as authorities rolled out spending data at different times between 2010 and 2012, Table 2 holds the time consistent for a selection of 11 authorities.

Those that supplied 'hits' instead of 'pageviews' displayed a similar variety, ranging between 8 to 548 total hits with an average of 200 per month. Given the varied responses and 'rolling' implementation, the numbers offer only a snapshot. However, the low use ties with the emerging picture elsewhere of a lack of wider public interest in the spend data (Halonon 2012: LGA 2012). Interest can also be compared with visits to other sites (note visits and page views are different and the table is indicative only)

Table 3 Comparative Visits for January 2012 on government and non-government Open Data sites

Site	Visits per month
Police.uk	540609
Data.gov.uk	161101
TheyWorkForYou	200-300,000
WhatDoTheyKnow	100-200,000

(Police.uk: Data.gov.uk: Esche 2011)

The FOI requests pointed towards further indicators of variable interests. The bounce rate, the number of pages viewed taken as a measure of engagement or interest, ranged from 10 % to 87 % with an average of 57 %. The average time of site varied from 16 seconds to 5 minutes, with individual authority averages spread between 36 seconds, 59 seconds and 3 minutes.

When asked to account for the numbers, survey respondents highlighted the fact that the public were either 'not aware or had no interest' and that the information was 'meaningless out of context'. However, the low number of views does not indicate failure.

Communications theory points towards so-called 'opinion formers' playing a key role (Chadwick 2012). The historical 'scarcity' of 'direct users' for financial transparency in the UK makes such 'information brokers' crucial to the diffusion of the spending data (Heald 2003, 747).

Both the government and interviewees felt applications would play a key part in promoting accountability, involvement and participation (Cabinet Office 2011). The data released represents only the early stages of an evolving 'ecology' that would require adaption, context and feedback mechanisms (Zuiderwijk et al 2014). The key shift comes when individual innovation then 'breaks through' to mass use (Karpf 2011).

Easy to use interfaces could offer these next steps, providing 'localised' information or trace spending from source to street-level, and offer the 'missing' explanatory context. Local authorities have indicated their interest, though are concerned at lack of resources (LGA 2012). A number of data intermediaries have appeared that offer users the ability to more easily understand the data in new ways. *Openly Local* attracts a high number of users with over 1000 hits per day (Worthy 2013). A similar site, *Spendingnetwork.com*, has around 50-70 hits day from a mixture of business and central and local government (Interview). As of writing, a number of the sites are new or experimental and need a greater 'critical mass' of users (interview).

It is not clear that these sites will form nascent 'severe performance regimes' or 'disciplinary technology', though their design would allow this (Margetts 2013, 170:Heald 2003, 753). Such platforms will not resolve all the obstacles. The continued lack of consistency or full information remains a severe obstacle even if enthusiasm remains undimmed (Rowson 2013).

Users

Despite governments' emphasis, there is no 'average user' (Meijer et al 2012). The users more closely represent the ad hoc collection of 'monitory' groups and bodies watching government with some political interest (Keane 2009). Table 4 indicates there are diverse groups with differing intent and motivation, as with FOI (drawn from surveys and interviews).

Table 4: Estimated Primary User Groups of Spending Data and Users of FOI

Primary User Group	Spend Data %	FOI %
Business	39	23
Media	31	33
Public	23	37
NGO	7	-

(Worthy 2013)

Respondents also mentioned occasional use by MPs, Trade Unions and councillors from within the authority.

Businesses are heavy users locally, as with FOI probably for a variety of motives from tenders to legal action (Worthy 2013). As Bates (2014) points out, much of the data is suited for business analysts. Though not explicitly political, this use may highlight service failure or complicate contractual tenders while, in the longer term, feed into the austerity and neo-liberal agenda within Open Data, allowing companies to eventually 'cherry pick' services (329).

The media are likely to be a key driver of Open Data use, using, innovating and publicising data (Margetts 2013, 175). At state and regional level in the US, journalists have mined data to launch accountability drives and, in one case, highlighted problems that led to criminal charges against corrupt politicians (La Fleur 2013). In the UK, authorities reported a 'flurry' of interest from local journalists that often died down. A search of national and regional newspapers found 183 articles specifically citing 'spending over £500' between May 2010 and May 2014. Spending data was used to question authorities, focusing on high level spending such as contracts as well as minor travel expenses or equipment, from computers to stamps. Reporting was heavier where there was controversy and a few national newspapers used the spending data to highlight use of Council credit cards (Daily Telegraph 2011). The local media also urged the public to use the data and berated non-publishing authorities.

The public were intended to be the beneficiaries but it is unclear who they are. The survey and the statistics above point to Open Data users as 'specific' individuals with 'specific interests'. It is likely they are, as with FOI at local level, a core of political activists and wider, less committed group of curious, often seeking micro or non-political information (Worthy 2013). Users of TheyWorkForYou were from a broad spectrum, but often politically engaged, male and elderly (Escher 2011).

Patterns of use combine high 'macro' and 'micro' transparencies: a mixture of 'fire alarm' and everyday research (Heald 2012). The use was characterised by one respondent as 'a small number of people interested in a small number of issues'. The macro or high level information sought concerned Council Tax and Business Rates. The low-level or 'micro-political' spending covered a range of data from the costs of Public Health Funerals to car parking and senior staff salaries: it was 'specific payees' or 'individual residents' seeking 'specific items'.

The Impact of Open Data: Accountability, Participation and Informing

Accountability

Accountability remains a contested idea and its relationship with transparency is complex (Meijer et al 2012). More than 40 % of the authorities surveyed identified some increased accountability as a result of publication, driven by an eclectic mix of groups already formally or informally 'monitoring' government, rather than citizens (Keane 2009).

There was some evidence for direct 'anticipated reactions' and professionalising of systems as a result of being 'watched' (Pratt 2006). Some interviewees felt publishing spending data had professionalised systems. A few authorities recorded improved information flows and a greater understanding internally of previously complex budget processes (Worthy 2013).

Any indirect effect would be dependent on use (Heald 2012). The ad hoc mix of 'monitory' bodies, from journalists, NGOs and the public, meant accountability was sporadic and unpredictable, driven by particular circumstances or local issues. Accountability stories often concerned particular pieces of spending or remuneration to senior members of staff (Interview). The pattern resembles other online innovations with 'punctuated equilibriums' that 'lurch' from one topic to another, 'bubbling up' from below (Hale et al 2013). The pattern is 'leptokurtic', representing sudden 'punctuations' around 'very little change' (Hale et al 2013).

There is no sign of an 'army' of auditors. In June 2011 a group of bloggers in held to account a flagship Conservative authority over its contractual procedures (Guardian 8 July 2011). Other online armchair auditors have established themselves in the North of England and Isle of Wight. The auditor is very much atypical, needing a rare combination of time, skills and interest, including IT and statistical literacy and a good knowledge of local government finance (Interview). Existing auditors appear to have a professional interest or expertise, a pre-existing activist base (such as an NGO) or a small network of engaged people (Interview). Auditors also require a certain context, often an 'accountability vacuum' when formal mechanisms have failed. The superficially 'simple' audit process is complicated by auditors not knowing what mechanisms to use once they have the information (E-democracy 24 November 2010). The obstacles to 'Armchair Auditing' reflects the weakness of 'crowd-sourcing', which is frequently reliant on 'a tiny subset of the crowd' (Clark et al 2013, 31; 26). Such 'fragile' work is often 'inconsistent', 'delicate' and 'likely to implode' (26).

A further question is whether the data produces any internal accountability. Only 8% of authorities identified officials and politicians using the data from within. One respondent claimed that 'attention was paid' to 'how this would look in the *Daily Mail*' and a few 'based

sourcing decisions on it' or used it for 'procurement'. However, a number pointed out that there is more useful spending information easily available to officials (Interview).

Participation

Welch's (2012) research into US local government concluded that that 'the relationship between participation and transparency is unidirectional: participation is associated with increased transparency' but not vice versa (108). While information may attract activism 'voluntary disclosure provides a means of reducing rather than increasing political pressure' (108).

Aside from the campaign in Barnet, there was no evidence of the spending data stimulating participation in the UK. Less than 10 % of authorities identified any increase in participation and even involvement in new initiatives was limited (see below). PASC concluded that there is 'little or no evidence' of Open Data 'encouraging greater public participation' (2014, 18). Rather like FOI, the main means of participation appears to be via proxies, particularly NGOs (Worthy 2013). As with other online participation, activism is frequently driven, initially at least, by those already organised (Karpf 2011).

Generally, local accountability or participation is frequently driven by controversy, such as the closure of local amenities (Worthy 2013). However, the spending data alone would fail to explain sufficiently the context that could drive such events (Interview). Moreover, the tools themselves may not be available-The Localism Act 2011 and Audit Act 2014 enshrined community rights to participate and new powers of involvement (Legislation.gov.uk 2014: House of Commons Library 2014). To date the new reforms have been limited and controlled (Moss and Coleman 2013). Authorities spoke of using the data in 'budget setting' and 'community budgets' but finding 'few takers'. One attracted 'local activists' but participation 'declined quite quickly'.

Informed

The new spending data has only diffused information to a limited extent so far. The media have served to publicise the spend data, though reporting does not compare to use of, for example, FOI information (Worthy 2010: Worthy 2013). Investigation of an individual authority's web statistics (Rotherham) found interest appears very low compared with views of other pages, such as service data or council decision-making information (Worthy 2013a). To be useful, data needs to be used 'found, interpreted and processed' (Moss and Coleman 2013, 22: 8). Numerous studies pointed to the lack of context and comparability in the spending data, even for basic information such as dates (Rowson 2013: PASC 2014). Authorities have varied volumes of publication, with some withholding large or sensitive payments, such as to former employees (Rowson 2013).

The hybrid hyper local sites also offered a means of disseminating stories locally but require a strong local network and, possibly, stories of relevance (Interview). The one difference from FOI is the emerging third party innovations that may create 'low threshold' ways of creating narratives and informing citizens (see below). The growing number of bottom up 'hyperlocal' sites offer a new channel of communication that could be exploited (Hepburn 2014). Around framing, it is likely that the data will continue to be framed and interpreted

according to biases and pre-existing understandings, often negative (Boyne et al 2007: Van Ryzin 2011: James and Moseley 2014).

The Impact of Open Data

The politicians pushing Open Data frame the reforms as means of enabling transformative change, driven by large scale involvement and participation. It is a simplicity supported by the technology and rhetoric that accompanies it. However, evidence from the local spending data indicates that the use and impact is more complex and more political.

The Complexities of Open Data

Numerous complex shape the impact. The nature of the data itself, the variety of users and the need for accompanying instruments mean Open Data has less of a wave and more punctuated disturbance. For example, the raw nature of the data influences what can and cannot be done. To be useful, data needs to be used 'found, interpreted and processed' (Moss and Coleman 2013, 22: 8). The idea indicates one of the misunderstandings about data - it is not 'power' by itself: it requires narrative and explanation (Gray 2012). One respondent explained that it was also 'difficult to provide [data] in a format that might encourage questions'.

Rather than the 'army' of auditors or involved public, low level use is spread broadly, or thinly, across businesses, a few members of the public seeking focused spending and journalists and NGOs highlighting local problems. This creates 'clusters' of accountability use and, far fewer, participatory uses. In a few cases, the data did become about 'blame'. One Swedish study highlighted a 'two-track' use of data with rapid use for techno-economic ends by companies and a more 'elongated' and 'reactive' set of uses for 'co-created societal growth' by civil society (Lassinantti et al 213, 29).

Adding to the obstacles is the need for integration-how or if it can be used is bound up in what instruments exist to hold to account, participate or inform. Local spending data is bound up with 'localism' (Flinders and Moon 2011, 657). Open Data is thus reliant on a 'plethora' of 'untested' mechanisms of accountability (Flinders and Moon 2011, 660:659). A US study concluded that Open Data reforms have led to transparency but not participation, because the mechanisms are not in place and, possibly, awareness is low (Ganapati and Reddick 2012, 120).

There may also be behavioural nuances. Far from information provision simply equalling involvement, research from the UK MPs' Expenses scandal found that, even when presented with clear wrong doing, many voters were unwilling or unable to act (Vivyan et al 2012). Research into the publication of local performance information pointed towards a dissonance between poor performance and action, with citizens failing to 'raise' their 'voice', even in highly supportive environments (James and Moseley 2014).

The Politics of Open Data

The evidence shows Open data also to be more political. First, the data is shaped by individual authorities and their enthusiasm and response to the reform. A few Councils are clearly deeply engaged and keen to innovative, a majority appear to be displaying minimal compliance and a few have engaged in outright resistance. Some are concerned that the

data and framing could become a tool of accusation and ‘anti-politics’ (Clarke and Cochrane 2013). Some surveyed authorities saw the data as a radical experiment in ‘co-production’ while others called it a ‘failed experiment’ or ‘a burden/chore that has to be carried out’. DCLG has identified a ‘varied’ response to other parts of the publication process (Cabinet Office 2013,14). Different amounts of redaction of the spending data may be indicative of variable levels of enthusiasm (Rowson 2013). Attitudes, cultures and leadership will condition implementation and response, from increased openness to defensive ‘bunkering down’ (Piotrowski 2010: Worthy 2013). Political support and resources are crucial (Ahn and Breteschneider 2011: Chadwick 2011). In local authorities, political interest and support, enthusiasm, resources and technical skills all vary. A similar variety of response and action was seen in a study of US urban innovations (Mossberger 2013). E-democracy and openness experiments are often a ‘poor relation’ to service delivery with ‘risk averse’ attitudes and ‘hierarchical cultures’ further dampening innovation (Hepburn 2014, 95-97). Research from Sweden found that local open data experiments were shaped by local conditions, as a ‘multi-direction process’ with no ‘common path’ (Lassinantti et al 213, 18).

Second, the local politics of Open Data also sits within a wider political context may also shape what happens. The UK has historically low levels of political participation (Game and Wilson 2011). Involvement and interest in local government remains low: only a quarter of the population feel they have influence over local decision-making and falling numbers wish to be involved (Hansard Society 2014).

Caught within the context is the narrative. Open Data is subject to ‘significant contestation’ (Lassinantti et al 213, 18). Research has revealed local government’s confusion as to the coalition’s aims (LGA 2012). The confusion is reinforced by ‘weak’ implementation and an ‘unwieldy plethora’ of bodies involved in pushing the agenda (PASC 2014, 36-37). The politics begins within central government itself- only a few ministers are Open Data enthusiasts with the rest ‘resistant’ (PASC 2014, 38). Crucially, the Treasury is ‘not convinced or persuaded’ (38). As with the US reforms, the Coalition government has seen several senior advisors leave including the key data innovator Rohan Silva (Guardian 2013).

As with the US spending initiatives or EU financial transparency, presentation frames the discussion in particular ways (Fung and Weil 2010: Meijer 2006). There is also political tension between central and local government, heightened at time of deep spending cuts and turbulent reform. Longo (2011) argues that, despite the air of neutrality, the reforms have a ‘political agenda’ as a ‘Trojan horse’ for privatisation (Longo 2011). Others were concerned that conflating ‘Open Data’ with Open Government acted as a smokescreen, offering chosen information ‘gifted’ by the government while eroding information rights (Interview). Moreover, a number of interviewees felt that the raw spending at such a low £500 level was designed to make local government appear profligate and wasteful, at time of deep spending cuts by central government: following Heald’s (2012) ‘upwards transparency’, publication was a ‘political’ tool to control local authorities or a means of transferring blame (Interview). Historically, such ‘blame transfer’ is a ‘standard device in fiscal politics’ (Heald 2003, 747).

Conclusion: the dynamics of Open Data

Open Data is at an early stage in an evolving cycle. On the evidence to date, as a democratic tool, the local spending data adds a further element of ‘turbulence’ and unpredictability to

the political process (Hale et al 2013). It brings some accountability and informing with isolated examples of participation. This matches work on other interactive tools, from the 'leptokurtic' and 'punctuated' effect of e-petitions to the 'unpredictability' of FOI (Hale et al 2013: Worthy 2013). The information also potentially opens up the 'political information cycle' to new actors and groups, or empowers those already present (Karpf 2011: Chadwick 2013). This may also have effects through anticipated reactions, though the extent appears limited. Much may depend on how government sees its citizens- the emphasis on armchair auditors, for example, appears misplaced (Coleman 2012).

The pattern of use is far from the 'simple' and 'mass use' picture painted by the actors pushing Open Data or offered by the technology. The reality is of more complex use and interaction pushed in different directions by the information, the context and the use and reaction. The reality is also more political. Open Data is caught within local politics but also conflict between bodies and between competing (and vague) visions and understandings of what it is for.

The danger is that such impact differs too much from the rhetoric and may prove underwhelming and invite disappointment (Worthy 2014a). It may discourage innovators and intermediaries. It could also trigger discontent or resistance in public bodies. The data released so far represents the first steps in an evolving 'ecology' of Open Data (Zuiderwijk et al 2014).

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