

POLICY IMPLEMENTATION AS PRACTICE? USING SOCIAL PRACTICE THEORY TO ANALYSE A UK SME TRANSPORT-RELATED BEHAVIOUR CHANGE INITIATIVE

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ABSTRACT

Following the ‘practice turn’ in energy research, increasing attention is being paid to the practices of policy making. However, energy policy implementation remains under-researched. Using auto-ethnographic and extensive interview data, this paper provides a narrative account of ‘Sustainable Routes’: a project offering grants and advice to small business in the UK to reduce their transport-related emissions. The project exemplifies the model of Multi-Level Governance (MLG), implemented by a coalition of actors, across multiple scales.

Research data is analysed using practice theory. Building on recent debates over researching large-scale phenomena, the notion of connected situationalism is used to analyse policy implementation as a bundle of practices. ‘Zooming in’ on periods of disruption following project audits, findings trace how tension and conflict arose in the relationships between actors, played out through the changing constellation of meanings, materials and competences. They highlight for example, how the reinterpretation of policy documentation led material elements such as bicycles to become associated with meanings of risk and liability, requiring a new set of competences on behalf of the carriers of practice.

This empirical account demonstrates the value of practice theory for analysing multi-actor, multi-scalar research data, and indicates potential for future research on policy implementation.

Keywords: Practice theory; multi-level governance; policy implementation; SMEs.

1. INTRODUCTION

Small and medium sized enterprises (SMEs) account for more than 13% of global energy demand, but are diverse in size, sector, location and in their environmental impact [1]. As a result, developing energy and low carbon policy is a significant challenge. Facing strong resistance to ‘hard levers’ such as tax and regulation, the preferred approach in the EU to reducing emissions from SMEs is through incentives such as grants, loans and behaviour change projects [2]. Despite their significance, few studies have examined how these incentives are implemented [1,3]. This paper addresses this gap by developing an in-depth account of a European Union (EU) funded behaviour change project.

Sustainable Routes was a project running from 2009-2015, funded by the European Regional Development Fund (ERDF), supporting SMEs in south-east England to reduce their transport related emissions by adopting new travel behaviours. The project was delivered by a range of institutional actors, including the European Commission, a UK central government department, a non-profit organisation, partners, evaluators and auditors. This project is typical of EU regional development policy, where responsibility for implementation is shared amongst a coalition of actors operating at multiple-levels [4].

The implementation of projects designed using this model of multi-level governance (MLG) is characterised by complexity [5]. Project implementation involves a variety of organisations and individuals, each carrying different responsibilities and pressures and responding to internal institutional demands, and the activities of others. Beyond the individuals carrying responsibility for implementation there are broader political and economic circumstances, bureaucratic rules and changing expectations for transparency, which must be interpreted and navigated [6,7]. In addition, project implementation relies on material elements including policy documentation and guidance, technology and the physical objects associated with travel behaviour change such as bicycles [8].

Given this complex assemblage, telling the story of the implementation of Sustainable Routes requires some analytical assistance. Practice theory, with emphasis on distributed agency [9] and a flat ontological worldview [10], offers a suitable framework for interpreting and representing the coming together of these human and non-human elements. It highlights the interdependent relationships between actors at different levels of governance, individually and collectively making sense of changing political and institutional environments [7]. Although practice theory has been used extensively within social scientific energy research [see 11,12, and a selection from this journal 13–16], there have been calls for greater engagement with energy policy discourse [17–20]. However, there is ongoing debate over how a practice perspective can be used to conduct research on large-scale phenomena [21,22]. Engaging with these live issues, this paper considers policy implementation as a bundle of practices [11], and applies analytical tools developed in practice theory to unearth a range of valuable insights.

The next section introduces the multi-level governance framework in the context of EU policy. It summarises social scientific energy research using practice theory, and reviews the limited attempts to apply this theory in a policy context. The third section describes the Sustainable Routes case study, and the fourth introduces the theoretical approach adopted by this paper. Section five outlines the methodological approach used for this research. Section six presents a narrative account, exploring how meanings, materials and competences changed over the course of the project's implementation [12]. Having identified the importance of discretion within implementation practice, section seven discusses its ontological status and policy implications. The final section reflects on the implications of considering policy implementation as a practice.

2. LITERATURE REVIEW

2.1 MULTI-LEVEL GOVERNANCE

Multi-level governance is a term which has been used to describe contemporary forms of governance, with emphasis on EU policy design [5,23,24]. MLG differentiates between different 'styles' of governance, including conventional 'Type I' actors such as institutions of government whose jurisdictions are defined by geographical area or broad policy remits and where clear hierarchies exist between organisations. 'Type II' actors on the other hand operate in flexible coalitions, often focused on specific tasks or policies and acting with overlapping jurisdictions. This distinction has been used to describe ways in which governance is changing, particularly with reference to cities, the state and supranational bodies [23,25].

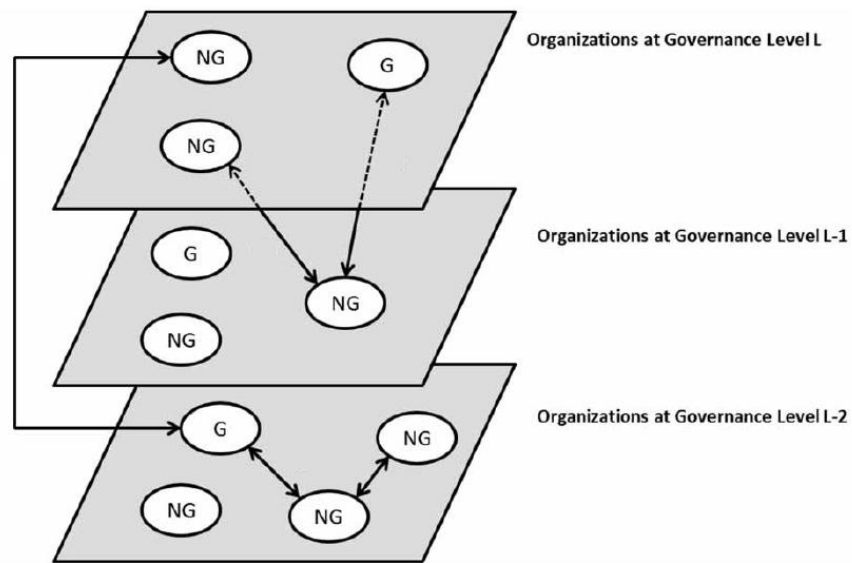


Figure 1 Marsden et al's representation of multi-level governance

Marsden et al. [24] focus on four UK case studies of transport policy to describe a form of governance which is fragmented, incremental, and involves multiple actors beyond the conventional institutions of government [26]. Figure 1 is the authors' representation of the different 'tiers' of governance typical of a multi-level project [5], ranging from the local (Level L-2) to the supranational (Level L). Bidirectional arrows depict the relationships which emerge between governmental, 'Type I' institutions (G) and non-governmental, Type II actors (NG). While the levels indicate the different scalar reach and remit of actors, the authors point out that these relationships are often non-hierarchical when it comes to sharing responsibility for policy implementation [24].

European SME policy exemplifies the model of multi-level governance, with Type I and Type II actors working in partnership. At the supranational level, the European Commission (EC) administers the European Structural and Investment Funds, which comprise a significant proportion of funding for SME energy policy across the EU. Worth roughly €1.8bn/year in the UK, these funds are overseen by the Department for Communities and Local Government (DCLG) at the national scale. Non-profit organisations design energy related projects and bid for allocations of funding at the regional level [27]. Commissioned projects such as Sustainable Routes then draw together multiple organisations with varying remits, including Chambers of Commerce, Municipalities, and micro networks of SMEs. Working together across these scales, these actors form task-oriented coalitions, sharing responsibility for implementing SME energy policy.

2.2 PRACTICE THEORY AND POLICY

Practice theory has become influential in social scientific research into energy demand. Proponents of the framework aim to develop analyses of energy consumption which move the unit of analysis away from

the individual and their motivations, instead highlighting the ways in which energy is bound up in the broader ‘doings and sayings’ of everyday social life [12,28–30]. This framework has been employed to produce accounts of the lives of practices, including showering [31], or achieving comfort in the domestic setting [32,33]. While its analytical strengths are well established, there have been calls for more ‘practicable’ applications of practice theory, to engage with the processes and practices of policy making, with a view to potentially influencing the role of government to better ‘steer’ practices [17,20,34–37]. However, such calls tend to focus on higher levels of policy discourse as opposed to the practice of implementing existing energy policy [24,35,36]. This paper focuses on the latter of the two categories described by one policy advisor interviewed for this study: ‘one is fluffy, one is the real world’.

Recent work exploring the linkages and barriers between practice theory and policy include Shove’s [38] fictionalised conversation between a policy-maker and a social scientist adopting practice theory. For Shove, efforts to mould ‘practice theory into some policy-amenable form’ are fruitless because of the paradigmatic differences between practice perspectives and the models of behaviour change adopted by energy policy makers. Others however, have drawn on practice theory to offer insights into policy practices themselves. Watson for example, has argued for an appreciation of the limitations of policy makers’ capacity to influence embedded systems of practice, emphasising the need to engage with the political dimensions of policy [22,34]. This is far from easy however, and there is debate within contemporary practice theory about how best to conduct research on large-scale phenomena, including institutions and public policy [21]. This is further discussed in section four, which also explains why practice theory offers a suitable framework for conceptualising multi-scalar implementation.

Despite Shove’s reluctance to adapt practice theory for the sake of policy audiences, the ‘three-element model’ of practice theory [12,39] has proven to be a popular heuristic for a number of authors aiming to effect change in policy discourse and practice. Kuijjer’s ‘bubble model’ develops this diagrammatic approach, depicting connections between types of elements, and illustrating that some may be more significant than others in individual performances of practice. Recognising the comparatively greater influence of the numerical sciences for policy, Higginson et al. [40] follow Kuijjer’s vision [29; Figure 22]^[OEB] in employing the model as a framework for quantifying practices. Their network maps of laundry illustrate how different elements are recruited to performances of practice, showing for example how the tumble-dryer competes with the washing line or clothes horse. These diagrams show how each performance involves a different configuration of the practice-assemblage, helping to trace how practices change over time as new technologies or social norms come to the fore.

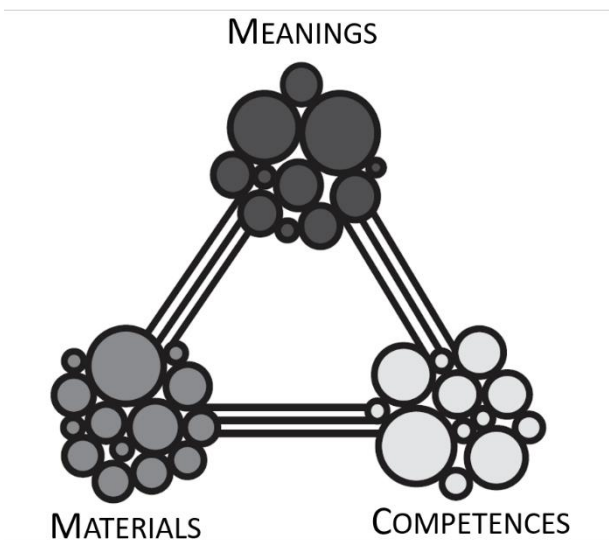


Figure 2 – Kuijjer’s development of the three-element model. Each ‘bubble’ represents an element of practice, the size showing the relative significance of each.

One strength of the three-element model is that it gives prominence to elements of practice with different ontological status. It highlights the meanings and cultures associated with practices, as well as giving voice to non-human, material elements [39]. An attention to competences accommodates different forms of intellectual and embodied knowledge, recognising the central role played by the 'carrier' of practices, without reinstating the individual as the principal unit [39,42].

This brief review of two literatures highlights the different epistemic traditions of multi-level governance and practice theory. While both offer useful insights for understanding the nature of policy implementation, using them in combination is not straightforward. The theoretical approach adopted in this paper is discussed in section four, but first some background on the empirical case study is provided.

3. CASE STUDY

Empirical data for this paper is drawn from a behaviour change project aimed at reducing transport emissions from SMEs. Funded by the ERDF, Sustainable Routes awarded small match-funded grants (\leq £1000) to over 700 SMEs based in the south east of England, assisting with the purchase of bicycles, secure bike shelters, showers, mobile computing technology and teleconferencing equipment.

The strategic priorities for the ERDF 2007-2013 funds were set in England by the nine Regional Development Agencies. The South East Operational Programme was produced in 2007 by the South East England Development Agency, with a central aim to 'promote competitiveness in South East England whilst contributing to reducing the region's ecological footprint' [43]. The Regional Development Agencies were primarily strategic and administrative bodies, and did not directly deliver projects. Instead, Local Authorities and non-profit organisations bid for funds by proposing projects which would target SMEs to stimulate job creation and promote 'sustainable production and consumption'.

The Sustainable Routes proposal for funding cited the 'Smarter Choices' report [44] which called for greater use of 'soft interventions' in sustainable transport policy, such as travel plans, car sharing, home-working and teleconferencing. While Local Authority transport teams in the south east had had some success in working with larger institutions such as schools and hospitals, they had struggled to promote this service to SMEs. Sustainable Routes partnered with a number of Local Authorities and the National Business Travel Network, creating a 'demand led' system for travel planning. Prior to applying for grants, SMEs entered business travel data into an online form and an algorithm produced tailored 'Travel Efficiency Plans', with recommendations for investment.

A non-profit organisation based in Buckinghamshire designed and administered the project from 2009 to 2015, working with DCLG Contract Managers, external evaluators and auditors, local authority partners, and recruiting participant SMEs. Written into the proposal for funding, the project had a number of contractual targets including saving 4,600 tonnes of CO₂, developing 2,400 sustainable mobility business strategies and delivering a net increase of £8.5m in Gross Value Added. This paper later discusses how the measurement of these targets became contested. However, on an official basis Sustainable Routes met each target, and was considered an exemplary project by all stakeholders [45].

Adapted from Marsden et al's representation of multi-level governance, Figure 3 depicts the coalition of actors involved in Sustainable Routes and their complex relationships. The diagram is a simplified representation of the different levels of governance, with national and supranational scale institutions – typically Type I - at Level A, and project focused, Type II actors at level B. SME beneficiaries and promotional partners (such as suppliers of energy efficient products) are represented at Level C. In practice, the different scopes and remits covered by institutions overlap and intersect in complex ways, and the bi-directional arrows indicate that relationships between actors are often non-hierarchical. However, for the purposes of depicting the *overall design* of Sustainable Routes' governance, the three levels used by Marsden et al provide a suitable, if normative, representation.

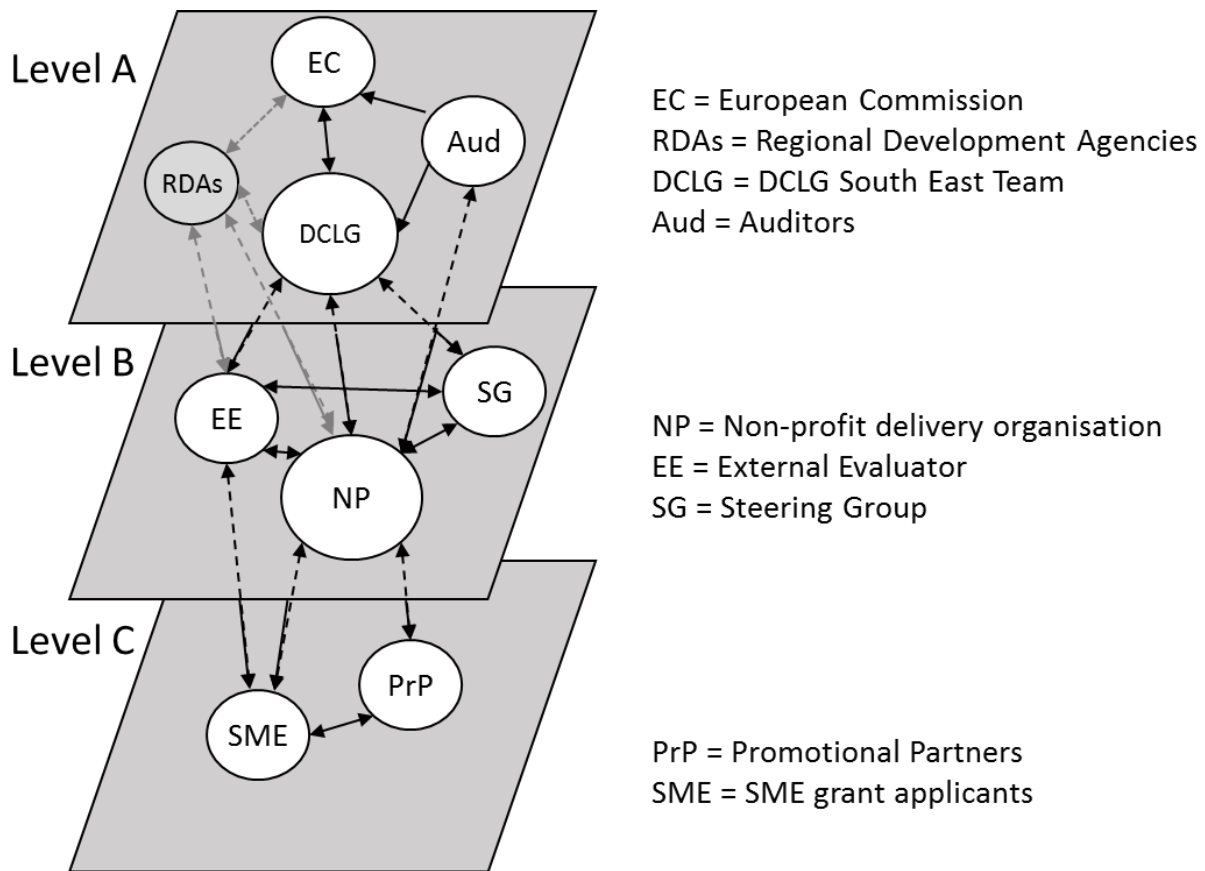


Figure 3: The multi-level governance of Sustainable Routes (adapted from Marsden et al 2014). The RDAs are displayed in grey because they were disbanded mid-way through the project. The dotted lines illustrate where connections run between levels.

4. THEORETICAL APPROACH

Sustainable Routes provides an example of multi-level governance in practice. However, while MLG provides a useful overview of governance design (see Figure 3), it is insufficient as a theoretical framework for understanding the experiences and everyday realities of implementation. It helps to describe the complex network of relationships between types of actors at different governance levels, but its focus is on institutions as bounded units. Relationships are represented as existing between organisational units, without delving into the lived experiences of the individuals working within, nor acknowledging the role played by non-human elements.

Practice theory offers an alternative framework for understanding policy implementation within this network of relations. Although it has not been applied in studies of energy policy implementation, it is well suited for this purpose for three reasons. Firstly, a characteristic of practice theory is that it conceives of social activity without foregrounding the individual [46]. Instead, practices are conceived of as entities themselves, 'carried' by individuals, and continually reproduced and sustained through performance [47]. There are parallels with multi-level governance, where no single individual nor organisation is singularly responsible for implementation [8]. Those carrying responsibility for implementation continually configure and shape this bundle of practices through everyday performances of work, and through their inter-personal and inter-institutional relationships.

Second, practice theory offers a perspective on social activity which acknowledges the role of elements of different ontological types. Its 'flat ontology' gives prominence to materials, and the different forms of knowledge and competences that make up practices [10,39]. Applied to multi-level policy implementation, this highlights the role played by bureaucratic documentation, interpersonal skills and concepts such as risk. By foregrounding these socio-material elements, the hybrid, 'more-than-human' nature of implementation practice emerges [48].

Thirdly, practice theory places emphasis on the *mutable* nature of practices. The three-element model, for example, conceptualises practices as relational 'constellations' of elements [39,46]; while Shove and Walker highlight the 'ongoing reproduction' of interrelated bundles of practice, through which societal expectations of energy services are defined [11]. Given continual change in political discourse, economic circumstances and policy objectives, even the most normative accounts of policy implementation acknowledge its dynamism [49]. Practice theory proffers an account of implementation as *emerging* from the dynamic relationships between elements. As such, it resists taken-for-granted definitions of institutional boundaries, and challenges reified levels of governance.

This last point highlights some of the conceptual tension arising from efforts to use both MLG and practice theory. This is particularly apparent in their respective treatment of scale and institutions. Emerging from the disciplinary tradition of political science, it challenges conventional notions of institutional power, hierarchy and the role of the state, and provides a more nuanced perspective on institutional dynamics, the emergence of new types of governance actors and the role of scale. Conversely, practice theory begins with a more radical approach to power and relationships. It flattens scale and questions boundaries, focusing instead on how power emerges through the integration of ontologically equivalent elements in

individual performances [22]. This bottom-up approach can however lead to difficulties when researching large-scale phenomena, including policy implementation [21,22].

Nicolini [21] discusses these issues with reference to different schools of thought within practice theory. He identifies the view of those adopting a truly flat ontological account of practices, for whom 'so-called 'large-scale phenomena' are constituted by and emerge through the aggregation of interrelated practices and their regimes of reproduction'. He points out this approach inevitably leads researchers to deconstruct social activity into its smallest constituent parts. This leads to a form of 'micro' sociology which deals inadequately with larger-scale social activity including the activities of institutions. When applied to policy implementation, researchers adopting this approach may be more inclined to focus on smaller-scale practices such as auditing, project promotion, adherence to rules or evidence keeping. While each of these contribute towards implementation, such empirical research would struggle to identify aspects of implementation which are greater than the sum of its parts.

Nicolini points out however, that the school of practice theory which promotes a flat ontology is far from ubiquitous, and other scholars, including Bourdieu and Giddens, contend that 'structure, power and fields exist in their right' and constitute a different 'level' of social activity [21]. Within this tradition, there is scope for differentiating between the ontological status of research subjects, allowing the 'impatient' researcher to reinstate objects such as the state without demonstrating its rhizomatic emergence from the field of practices.

This paper adopts the approach of Nicolini's third and preferred category, which he names 'connected situationalism' [21]. Retaining the philosophical integrity of a flat ontology, this enables researchers to investigate and comment on large-scale phenomena. Rather than direct attention to activity carried out in a single scene of time and space, connected situationalism pays attention to connected 'chains' of performances in multiple settings. From this perspective, multi-sited practices are constituted by a combination of performances *and* the relationships between them. In one move, this device incorporates the broader context in which performances take place, and lays the ground for 'zooming in' on the performances which constitute large-scale phenomena [see earlier work 50]. In Nicolini's words: 'performances therefore can be understood only if we take into account the nexus in which they come into being' [21]. Connected situationalism resists the temptation to reify levels of governance and institutional boundaries, but explores the ways in which their scope, power and influence emerge from multiple performances and their interwoven socio-material elements. It is therefore sympathetic to case-study based research, in which the global is simultaneously reflected in, and constructed by, the local. As Nicolini writes elsewhere [50], *zooming in* involves a re-positioning of the theoretical lens 'so that certain aspects of a practice are fore-grounded and others are temporarily sent to the background'. This close analysis then enables the researcher to *zoom back out* to reflect on the 'translocal effects' that situated performances have on wider practice assemblages.

The question of how to conduct empirical research on large-scale phenomena is a live debate within practice theory [17], and no consensus has been reached regarding the optimal analytical approach. Acknowledging that policy implementation accommodates a variety of smaller practices such as those described above, this paper therefore uses the notion of 'bundles' as adopted by Shove and colleagues

[12,11], to provide an account of a large-scale set of interconnected activities. Given the inherent complexity involved in researching interrelated, multi-sited practices, there have been few examples of empirical studies of practice-bundles, and fewer still investigating the web of complex, relational activity involved in implementing multi-level policy. In an exploratory move, this paper appropriates the analytical tools developed to analyse individual practices, showing that the three-element model, and the notion of connected situationalism provide fruitful analytical assistance.

In support of its theoretical approach, this paper builds on the respective traditions within both MLG and practice theory of using diagrams to depict (1) a complex web of actors, and (2) constellations of practice elements. Within practice theory, the three-element model provides a useful categorization of elements types, but does little to portray the carrier of practice. By implication, we can assume that the three-element model considers each practice-performance to be carried out by a single carrier. This is problematic when portraying large-scale practices which involve multiple practitioners.

Developing the multi-level representation of Sustainable Routes in Figure 3, Figure 4 retains the three governance levels, as a simplified and normative depiction of the scope of the different institutional actors involved in the project. Integrating the three-element model of practice theory into this representation, it suggests that the elements of shared practice provide the scaffolding upon which bidirectional relationships between governance actors are built. This simple model helps to illustrate the notion of connected situationalism, and provides the basis for analysing multi-actor implementation practice.

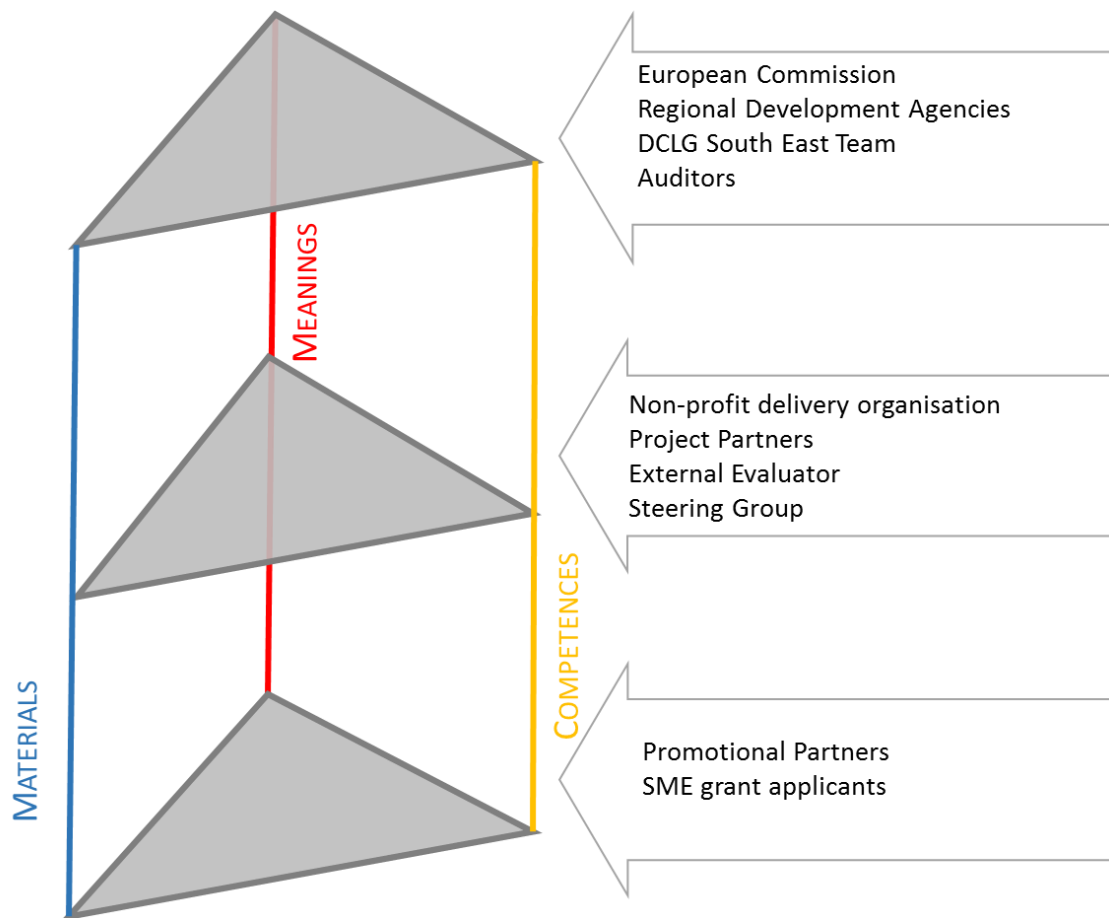


Figure 4 - Combining Multi-Level Governance with the three-element model of practice theory to depict the shared practice of implementation

5. METHODS

The methods for this case study research are drawn from the principles of ‘analytic auto-ethnography’ [54]. I became Sustainable Routes Project Manager in 2013, with responsibility for delivering targets, balancing finances and liaising with project stakeholders. I was employed by the non-profit delivery organisation before becoming a full-time researcher in October 2015. This direct involvement provided in-depth knowledge of the processes, pressures and deliverables associated with the project, later drawn on when Sustainable Routes was chosen as a focus for empirical study.

Anderson [54] argues that postmodern discourse on research methodology has led to a preference within social science for ‘evocative auto-ethnography’, whereby researchers, all too aware of their own positionality, avoid making realist or analytic observations. Anderson aims to revive the analytic approach by setting out five guiding features for researchers. (1) Defending the conventions of ethnography, he suggests that as ‘complete members’ of the institution under study, researchers’ gain privileged access to data. (2) Researchers must analytically reflect on their position; (3) present data in a way which does not obscure the researcher’s self in the analysis; and (4) support their evidence through dialogue with

informants beyond the self. (5) Finally, a desire to do more than present internally directed observations, but to comment on broader social phenomena ‘from the inside’ distinguishes the analytic approach. Table 1 describes how these features are adopted in this paper.

Table 1 - Applying Anderson's five features of analytic auto-ethnography

<p>1) Complete member status</p>	<p>As former Project Manager, I had access to a variety of data which were compiled and analysed for this paper. These included project documentation, official ERDF implementation guidance, email records, audits and evaluation reports, parliamentary transcripts and government archives.</p> <p>As a ‘complete member’, I built personal and professional relationships with each of the stakeholders involved in the practice of policy implementation. They were emotionally and professionally invested in the project. In theoretical terms, they were one of the active ‘carriers’ of the practice of implementation.</p> <p>Given the complexity, depth and timescale of Sustainable Routes, vast quantities of data were produced and analysed as part of this research. Having complete member status is the only viable means of conducting research on implementation at this scale.</p>
<p>2) Analytic reflexivity</p>	<p>Soon after starting as project manager for Sustainable Routes it became apparent that my priorities differed subtly from other stakeholders. With an educational background in social science and a passion for the environment, I was primarily motivated by business behaviour change and emissions reduction. Other project stakeholders were comparatively unfamiliar with environmental accounting methodologies, specialising in compliance and supporting businesses to grow.</p>
<p>3) Narrative visibility of the researcher’s self</p>	<p>Whilst working on Sustainable Routes I maintained a personal journal which included reflections on the experiences of implementing the project. Although it had not been written as a research diary, extracts are included in the subsequent findings.</p>
<p>4) Dialogue with informants beyond the self</p>	<p>All of the individuals with significant involvement in Sustainable Routes were recruited and consented as participants for this study. Empirical data are drawn from semi-structured interviews with ex-colleagues, the project evaluator, and senior figures within the DCLG European funds team.</p> <p>Interviews were conducted 6-12 months following the closure of Sustainable Routes, so were also an opportunity to reconnect with ex-colleagues and collaborators. As such, discussions were informal. Some interviewees had since moved on to new roles outside low carbon SME support, whereas others were in the process of bidding for new project funding and re-writing documentation for new projects.</p> <p>Interviews lasted between 40 and 70 minutes, were digitally recorded and transcribed verbatim, but quotations are kept anonymous.</p> <p>The diagrams used to present findings were developed in collaboration with interviewees and are used to depict the practice of policy implementation. Although the portrayal of implementation practice and its constituent elements</p>

	were discussed with participants, the depiction of the meanings, materials and competences are inevitably influenced by my own memories and sense-making processes [7]. Diagrams should be interpreted as illustrative rather than comprehensive representations.
5) Commitment to theoretical analysis.	This paper provides insights into the practice of policy implementation in the context of UK SME policy, and contributes to efforts to research large-scale phenomena using practice theory [21,53].

6. FINDINGS

6.1. AUDITS AND DISRUPTION

Sustainable Routes ran from 2009 to 2015, during which time a number of political and administrative changes affected project implementation. In June 2010, the new coalition government in the UK announced the abolition of Regional Development Agencies as part of the so called ‘bonfire of the QUANGOs’ [55], and the administration of ERDF funds was ‘centralised’ into the hands of DCLG. This process involved consolidating policy guidance and targets from each region and creating new ERDF teams within the direct employ of DCLG. Respondents described this process as ‘messy’, ‘painful’ and ‘an absolute nightmare’. The new government also implemented radical spending cuts and DCLG faced the most extensive real-terms cuts of all central government departments¹, involving staff cuts, office closures and resource constraints [56].

The centralisation of ERDF administration to DCLG alongside its reduced resources marked a shift in the performances involved in implementing Sustainable Routes. Previously, when making decisions about the eligibility of a particular SME for a grant, an individual purchase or the acceptability of financial evidence, DCLG staff and project delivery teams had negotiated with the project team ‘on a case by case basis’ (*DCLG employee*), making reference to, but not completely deferring to, official guidance. From 2011 to 2013, a series of audits were conducted, focusing on DCLG’s role as the managing authority for European Regional Development Funds. The European Commission (EC) and the Government Internal Audit Agency each identified a number of issues, known in European policy jargon as ‘irregularities’:

‘They came in and ripped us apart, how we did the transition from the Regional Development Agency [to DCLG]...oh they ripped us apart on every single bit...’ (*DCLG employee*).

Critical audit findings forced DCLG to tighten its procedures, particularly regarding financial record keeping. Previously DCLG had used its discretion regarding what constituted financial evidence, accepting invoices and receipts as documentation of project expenditure. However, the audits stipulated that these forms of evidence were insufficient, and that bank statements, ‘wet ink signatures’ and declarations that documents were ‘true copies of original documents’ would now be required as evidence of payment. Not

¹ 51% between 2010-11 and 2015-16 [56]

only did this lead to increased paperwork and lengthier financial claims processes for all actors involved in the implementation of Sustainable Routes, but it also meant that funds allocated to the UK were ‘clawed back’ by the EC. Both of these outcomes were raised as items for concern in the UK parliament [57].

Whereas the model of governance on Sustainable Routes had involved close working and collaborative decision-making, the audits introduced each risk and liability. DCLG responded by becoming increasingly reluctant to make individual judgements.

‘For the projects... if they ask, you refer them to the guidance. That way you're safe. So the project can't come back and say ‘so and so said this’.’

The difficulty with this shift towards a reliance on written guidance was that the standardisation process had reduced the amount of official documentation available. While a ‘National ERDF Handbook’ [58] had been produced as an attempt to consolidate regional guidance, at 137 pages it was less than a tenth of the length of the earlier ‘User Manual’ [59] and lacking necessary detail.

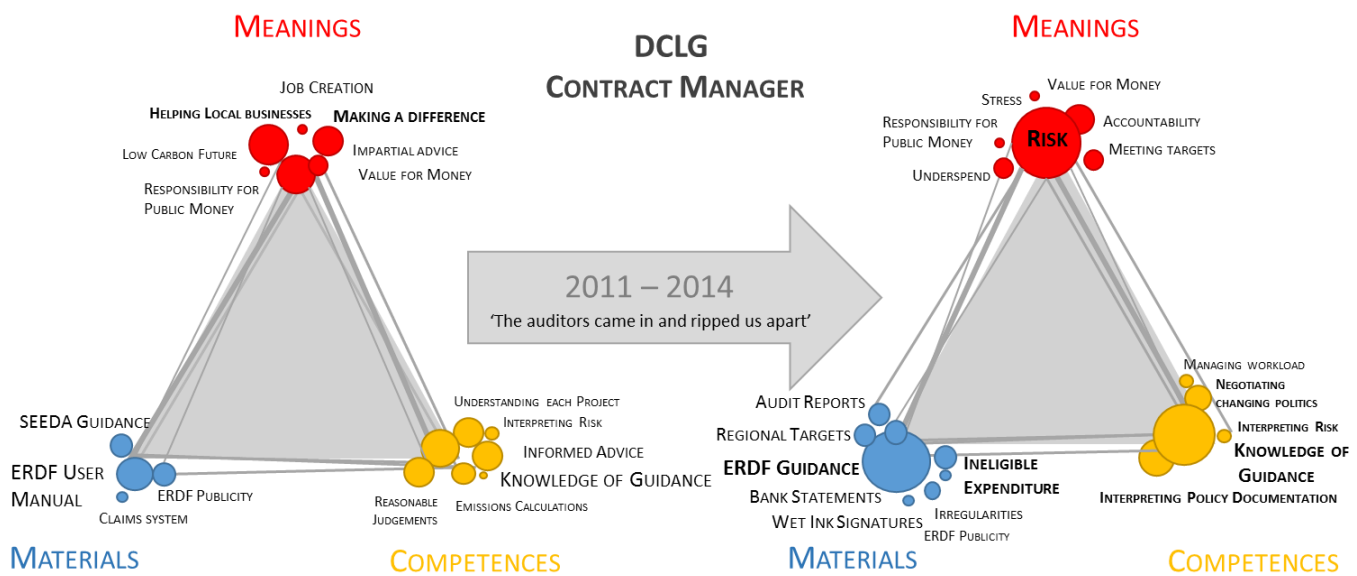


Figure 5: The changing nature of policy implementation-as-practice, for the DCLG Contract Manager on Sustainable Routes. (Developed from Kuijer, 2014)

Figure 5 uses the three-element model of practice theory as expanded by Kuijer [41] to represent changes in practice undergone by the DCLG Contract Manager in response to the EC and internal audits. Charting the period from 2011 to 2014, this diagram was co-created with DCLG staff to illustrate how the meanings, materials and competences involved in their everyday working practices changed over time. A draft version of this diagram was developed and discussed during the interview, leading to the identification of

additional elements and the adjustment of the size of each 'bubble', which are used to convey their relative significance.

From a practice theory perspective, moves towards stricter adherence to official guidance may be described as reconfiguring the constellation of elements. Figure 5 charts this reconfiguration, showing how risk, accountability and stress came to replace 'making a difference' and 'helping local businesses' as dominant meanings in their daily working practice; and how bank statements, wet ink signatures and ineligible expenditure emerged as new materials. The need to interpret risk, negotiate changing political environments and make risk-laden interpretations of guidance documents were new competences developed as part of the practice of policy implementation.

An ironic consequence resulted from the abridgement of official guidance alongside the command to DCLG Contract Managers to adhere to it. Whilst guidance documentation took on greater significance in the practice of policy implementation, it was reducing in length, requiring actors to make greater interpretative leaps. Figure 5 illustrates how the competences involved in making reasonable judgements, understanding each project and providing informed advice were replaced by requirements for increased knowledge of guidance, political negotiation and interpreting risk.

6.2. EVIDENCE, DOCUMENTATION AND THE DYNAMICS OF RISK

The EC and Internal audits led to new requirements placed on actors at all levels, reconfiguring their working practices. One major material change was the new requirement for evidence of financial defrayal for all project payments in the form of bank statements. For Sustainable Routes this covered administrative expenditure as well as match funding invested by SME grant recipients, a sample of which was requested by DCLG's Finance division in 2014. However, the project team had up to this point been accepting receipted invoices in lieu of bank statements, having agreed this with the DCLG Contract Manager at the start of the project. This request coincided with two separate internal DCLG audits, both of which continued to accept receipted invoices as evidence of match funding. In response to protests against the inconsistency of evidence requirements, the project team were referred to a single reference in the ERDF guidance that stated: 'evidence of [defrayal] *can* be required by an auditor (in the form of bank statements)' [59 parentheses in original].

At the time of this disruptive revelation, the project had awarded over 400 grants to SMEs, roughly 50% of which had supplied bank statements as evidence of defrayal. In written communications, DCLG representatives held a firm line, warning of financial 'clawback' where evidence could not be produced for the audit sample. Indeed, in a number of other cases where auditors found documentation to be missing, financial penalties had been issued. Despite extended negotiations, the project team cascaded the requests for bank statements to the grant recipients in question, leading to displeasure from SMEs where this related to payments made over two years previously.

While it was tacitly clear to all that the required documentation was missing in a number of cases that extended far beyond the sample selected for audit, auditors and DCLG staff *did not* seek to pursue cases beyond the bounds of the audit. This case is an example of the ironic consequence of the move towards

greater adherence to official guidance as a means of achieving transparency and accountability: the discretion of individuals was as important as ever [60].

As project manager, the period following these audits was the most demanding and stress-inducing while working on Sustainable Routes. When joining the project in 2013, I had anticipated investing most of my efforts in supporting SMEs with grants and advice, and using skills of persuasion and persistence to engender sustained behaviour change. Now, having to examine the projects' terms and conditions, deal with accusations of blame, request financial evidence from grant recipients and mitigate against potentially catastrophic financial penalties required a markedly different set of competences. My journal notes from this period focused on managing confrontation in a working environment, and I began reading about developing assertiveness skills [including 61].

'I'm fed up of confrontation and difficult people, and having to stand my ground, whilst also doing a lot to accommodate others. There is so much hostility! It's tiring, and it's bringing out a side of me which is unfamiliar and uncomfortable.' (Journal entry, 25/9/14)

While it was reassuring to see that auditors seemed to be exercising discretion by not seeking to uncover further financial irregularities, there could be no guarantee of their continued tact. As project manager, this induced a degree of anxiety which was reflected in further a journal entry:

'I've been really stressed at work and am feeling rubbish about going in this morning. Lots of people being difficult, and I've got a difficult phone call to make today with a project partner. And then the Steering Group meeting next week! Feeling overloaded with work.' (Journal entry, 20/4/15)

These journal entries demonstrate the how the development of these new, challenging competences were being developed *relationally*, between different stakeholders on the project. The reconfiguration of implementation-as-practice was being played out through interactions such as difficult telephone calls, confrontational meetings and awkward silences.

Figure 5 above showed how the elements of practice for a single actor became reconfigured as a result of the project audits. The account of bureaucratic (re)interpretations, discretion and stress builds on this to demonstrate how this reconfiguration plays out through interactions *between* carriers of practice. Figure 6 *zooms in* on a sub-group of actors during this period: the DCLG Contract Manager (Level A), the Project Manager (Level B), and an SME which was asked to retrieve bank statements from two financial years previous (Level C) [50]. This diagram visualises how elements were shared and exchanged between the different actors Bank statements, project terms and conditions and official guidance became significant *material* elements at all levels, whilst risk, blame and accountability became dominant *meanings*. Key *competences* now included the interpretation of legalese, assertiveness and persuasion.

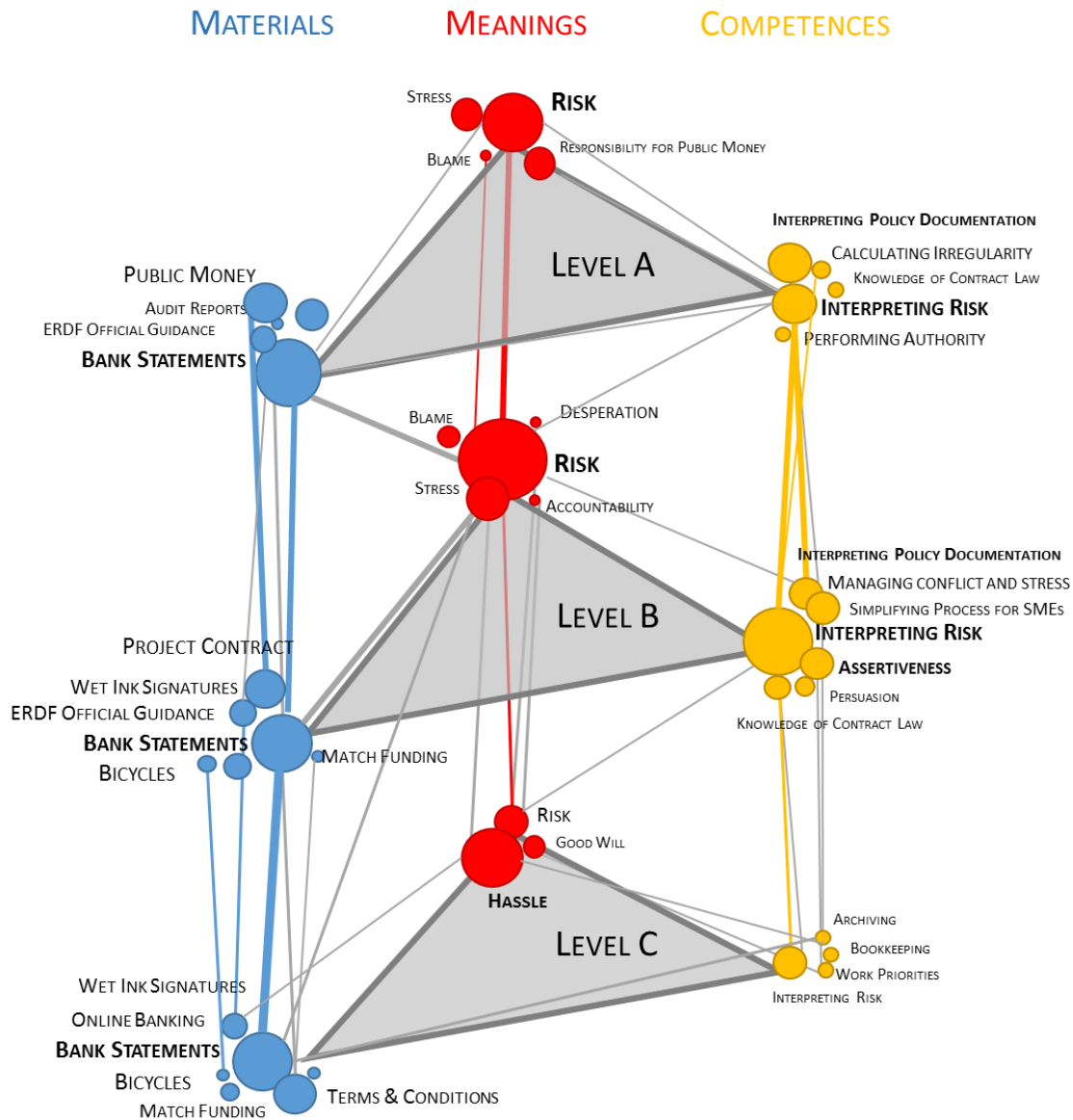


Figure 6: The intersecting elements of the practice of policy implementation following project audits. Not all relevant carriers of implementation are depicted. The top level shows DCLG Contract Managers and Auditors; the middle level represents the project delivery team; and the bottom level refers to SME grant recipients who were asked to provide bank statements months after receiving support. The coloured links indicate a connection between a shared element.

Figure 6 helps to depict the key elements of implementation practice on Sustainable Routes following the disruptive audits. It illustrates how risk became pervasive on the project, felt most strongly by the project team at Level B, as it was their responsibility to gather bank statements and wet ink signatures, or else face fines. The diagram highlights the links between risk and these material elements, and how it related to competences such as assertiveness, managing conflict, and knowledge of contract law. The

diagram is a simplification of the complex socio-material assemblage, but which conveys the interrelated activities carried by all carriers of implementation practice. It flattens the carriers of practice into artificially distinct levels, and fuses together a bundle of small-scale practices. This depiction illustrates how power and influence were played out in the *trading and sharing of elements* in this period of tension in the story of Sustainable Routes' implementation.

6.3. THE PARADOX OF TRACING CHANGE THROUGH FIXED OBJECTS

The discussion above showed how disruptive audits led to significant change in the implementation Sustainable Routes, tracing these changes within the relational dynamics of multiple actors and the constellation of elements. This section discusses an example where the reconfiguration of elements led to an outcome which directly *counteracted* the low-carbon objectives at the centre of Sustainable Routes. It does so by following Nicolini's notion of 'zooming in' on a particular material element [50].

From 2014-2015, a partner of Sustainable Routes was running a parallel transport behaviour change project targeted at SMEs. Aware of the increased significance of official guidance, in December 2014, they requested some help in interpreting the ERDF rules on eligible expenditure. They raised a question with a DCLG official relating to the following passage:

'Mobile infrastructure such as buses, boats and other vehicles cannot be funded with ERDF because of the possibility that the asset will be removed from the Operational Programme area' [62, Section 6.6].

Although not specifically mentioned here, the official interpreted this text as applying to *bicycles*, meaning that they would be ineligible for grant funding. At this stage, Sustainable Routes had already supported dozens of SMEs to purchase bicycles for the purpose of substituting the car for shorter business trips. Suddenly, these investments became at risk of being clawed back if they were included in future audit samples, and the auditor interpreted this guidance in the same way as their colleague. Without changing in physical form, or becoming any less effective at reducing emissions, the bicycles, distributed amongst SMEs in south east England, became *roaming symbols of liability*.

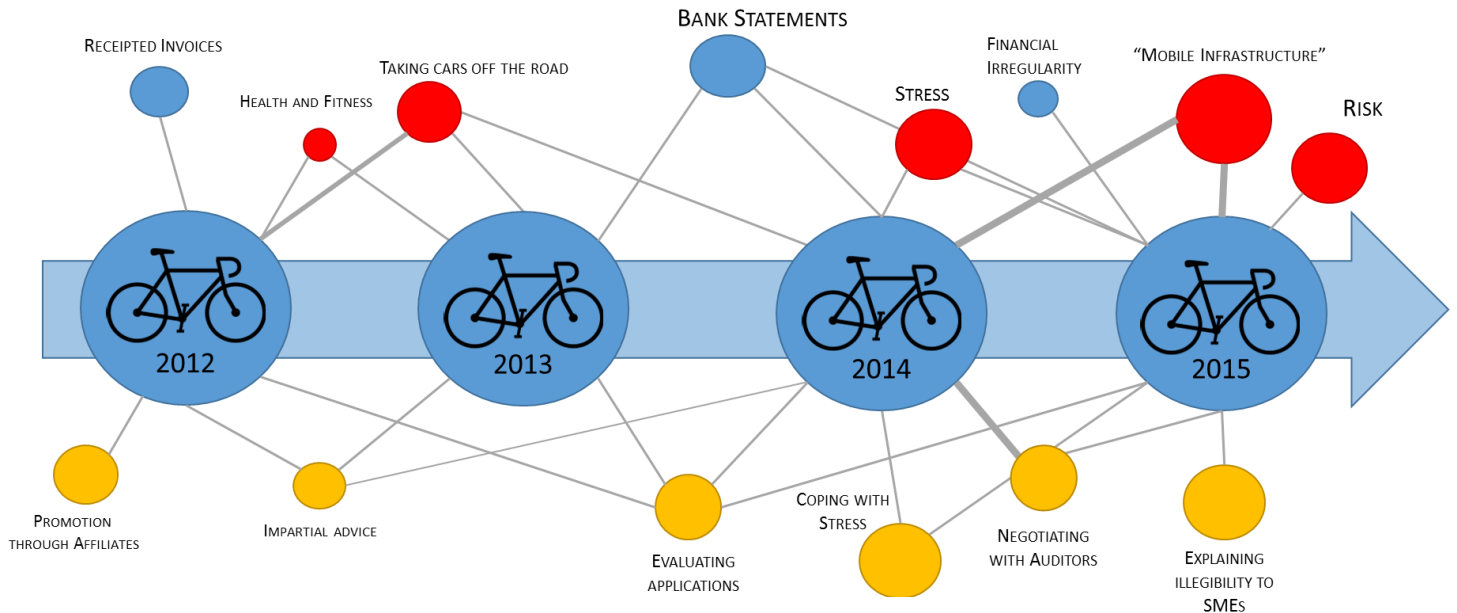


Figure 7 Tracing the relational dynamics of a single material element: the bicycle

Figure 7 represents how the material element of the bicycle became associated with different meanings and competences over the course of the project. Whereas in the project’s early stages the bicycle was associated with behaviour change, reduced car dependence, and required only receipts as evidence of defrayal, it later became associated with stress, risk and bank statements. This produced a paradoxical situation where the physically unchanging element became a pivot around which the constellation of elements shifted, reconfiguring the practice of implementation as a whole.

This example further illustrates the importance of discretion in policy implementation, which can operate in different ways. On the one hand, the inclusion of ‘mobile infrastructure’ by the DCLG official was an unfavourable use of discretion, leading to risk. On the other hand, the fact that the request was made by a parallel project meant that there was no explicit effort to seek out cases of ineligible investment on Sustainable Routes. It would be left to a combination of sampling probability and auditor discretion whether these risk-laden bicycles would lead to financial penalties.

The bicycle example shows the value of practice theory as an analytical framework. Its flat ontology enables us to focus on a single material element and to trace its changing relationships with other elements [21,35,50]. By following the relational dynamics of hybrid elements, a practice perspective helps to construct an account of implementation which reflects the unfolding, emergent experiences of all those involved in the project.

6.4. MEASURING CO₂ SAVINGS

Like all publicly funded behaviour change programmes, Sustainable Routes was subject to specific targets, known as 'indicators'. Given the central purpose of the project was to reduce SME transport emissions, a key indicator for the project was 'Tonnes of CO₂ saved'. Although the target of 4,600 tonnes remained unchanged, like the bicycle, its role in the wider assemblage shifted as a result of audits, fines and institutional restructuring.

Sustainable Routes' targets had originally been set by the Regional Development Agency. However, when this body was disbanded, a number of regionally specific targets, including 'Tonnes of CO₂ saved' were not incorporated into the updated indicator guidance document. This led to an impasse:

'It would be impossible for our policy colleagues to give any advice to somebody in the south west on a particular indicator, because it would be a different activity in the north east. So that wouldn't have happened.' (DCLG employee).

Instead, projects such as Sustainable Routes had to rely on guidance written before any projects had been commissioned, which was inevitably outdated and unfit for purpose. Guidance for some targets was thorough and specific. Evidencing 'Jobs Created' for example, required copies of employment contracts, job descriptions and letters from beneficiaries with 'wet ink signatures'. However, there was no official guidance regarding the calculation of 'Tonnes of CO₂ Saved' despite this being the central aim of the project.

With no guidance, the calculation of the project's CO₂ savings relied on self-reporting of saved mileage by SMEs and a number of assumptions about vehicle efficiency and continued behaviour change. One interviewee reflected on this unaudited methodology:

'[The measurement of CO₂] didn't work at all... it literally was...pick a figure in the air'.

Although the primary objective of Sustainable Routes was to deliver SME travel behaviour change, respondents expressed doubt that sustained emissions reductions were being achieved to the degree reported. This point was made explicitly by one interviewee:

'It's not about low carbon at all actually... it's satisfying the [European] Commission that the programme is being delivered in a compliant and eligible way'. (DCLG employee)

Findings also suggest low levels of knowledge and competence relating to environmental sustainability. For DCLG in 2007, the low carbon Priority Axis in the south-east ERDF programme represented a new focus, outside their conventional scope of work:

‘Was it carbon? ... carbon emissions saved or you know, lowered or something. I couldn’t get my head around that because that’s not my specialism. You’re giving me the figures but I can’t verify that they’re accurate because I don’t have the tools’
(DCLG employee).

This low level of environmental literacy was not confined to individual DCLG employees, but apparent in policy documentation, where the official target required measuring ‘Tonnes of CO₂ saved’ rather than CO₂e (carbon dioxide equivalent), the standard metric for measuring emissions. Measuring CO₂ alone fails to account for non-carbon greenhouse gases, including those arising from transport emissions such as nitrous oxide (N₂O).

‘The aspiration is there but people writing programmes don’t really understand it’.
(ERDF advisor)

These findings show that the CO₂ target was peripheral within the everyday practices of implementing Sustainable Routes. It suffered from not being encoded in guidance documentation, and from the lack of consensual motivation or environmental literacy across the coalition of actors. The story of the CO₂ target is the antipodal corollary of the ever-greater prominence of risk and financial documentation. As these elements took more time and attention from the carriers of practice, less was invested in accounting for the environmental performance of the project.

At the point of its final closure, the project reported having saved 4,676 tonnes of CO₂ as a result of reduced SME transport emissions. However, there was no officially sanctioned methodology for assessing this impact, and it was never audited. The case of the CO₂ target can be seen as a form of *systemic* discretion. Whereas the examples of discretion relating to bank statements and bicycles may be seen as more or less *benevolent* moves to circumvent stifling bureaucracy, the measurement of CO₂ – an important project objective – was neglected. Discretion in this case was not simply a question of individual choice exerted by street-level bureaucrats, but resulted from low levels of knowledge and motivation on behalf of DCLG officials and auditors, and insufficient guidance. It may also have been a response to issues such as financial documentation taking prominence, and a tacit appreciation of the bureaucratic burden placed on project teams as a result. Already stretched auditors and DCLG officials may have been reluctant to begin stringent and conflict-inducing auditing of an environmental metric on which they had little expert knowledge.

Although the project was designed with greenhouse gas emissions reductions as a core objective, environmental accounting is a nascent subject within the history of regional policy implementation. Its position within the wider structures of policy implementation is peripheral and fragile compared to established frameworks for financial reporting. As the practices involved in Sustainable Routes’ implementation mutated over time, and elements such as risk, compliance and documentation came to the fore, this policy objective was squeezed aside.

It is likely to be some time before CO₂ measurement achieves the same prominence as financial accounting within policy implementation. However, the case of Sustainable Routes identifies an opportunity for improved environmental literacy amongst certain actors including DCLG policy officials,

and a need for supporting documentation to guide coalitions through project implementation. In designing new initiatives, there is an opportunity to build greater flexibility into policy governance. In practice, this would mean creating 'living' policy documents by designing mechanisms for case learning and review. Rather than providing risk-laden interpretations of specific sentences in guidance documents, policy officials could offer advice and build closer relationships with actors at other levels of governance, including project managers and evaluators.

7. CONCLUDING THOUGHTS

Starting with MLG as a descriptive framework, this paper has taken on the ambitious challenge of using practice theory to analyse a multi-actor, multi-scalar transport-related behaviour project. Given the difficulties of applying practice theory in a policy context, this exploratory usage aims to contribute to the debate on how best to use it for research on complex bundles of practice. This section reflects on this paper's theoretical contribution and discusses implications for future research.

Whereas practice theory has been conventionally used within energy research to investigate clearly delineated practices such as showering and cycling, this paper has applied the rich framework provided by practice theory to a broader bundle of energy-related social activity. This is challenging for a number of reasons. Firstly, as a large-scale phenomenon, policy implementation is made up of multiple smaller practices such as auditing or negotiating. This makes conducting interviews with individuals more challenging. Unlike showering, the implementation of a project such as Sustainable Routes is not performed in discrete instances by individuals, but is constructed through 'chains' of performances, connecting the practices of multiple actors, spanning scales [21]. As part of a *coalition of carriers* of this practice-bundle, individuals were able to talk freely about their own smaller-scale, subsidiary practices [64]. However, in order to construct an account of implementation as a *whole*, it was necessary to supplement these partial accounts with auto-ethnographic reflections and a close attention to material artefacts such as policy guidance documentation.

Second, examining a large-scale practice-bundle inevitably provides only a partial account, as the wealth of data involved requires the researcher to 'zoom in' on particular performances [50]. Given the scale of Sustainable Routes, running over six years and involving a range of actors, this account focused on instances of tension and disruption. Tracing how elemental dynamics and inter-actor relationships unfolded in response to external interventions such as audits and institutional restructuring, insights were provided into the evolution of the practice-bundle as a whole.

There are clear empirical challenges associated with researching complex bundles of practice, and few studies have applied the principles of practice theory to such a large-scale phenomenon as policy implementation. Appropriating tools developed to analyse individual practices, this paper has demonstrated that practice theory can be used to offer an alternative perspective on practice-bundles, generating valuable insights into a rich set of qualitative data.

Firstly, starting with a flat ontology, it resists the temptation to focus on individuals or institutions, but constructs an account of implementation which emphasises the role played by a variety of socio-material elements. This ontological impartiality allows the research lens to be focused on material elements,

tracing how guidance documentation and bank statements became more prominent over the course of the policy lifecycle; their associated meanings and competences changing even where the physical materials remained unchanged. An in-depth look at the role of the bicycle demonstrates how these objects had initially been associated with 'making a difference', later becoming imbued with risk as reinterpretation of policy guidance led to a change in the constellation of elements.

Second, like other research on policy implementation [60,65,66], the account of Sustainable Routes demonstrated the important role of discretion. Conventionally, discretion is considered to be a question of choice, exercised by individuals, endowed with institutional responsibilities. However, a practice theory perspective offers an alternative view. Instead of being solely a product of an individual's attitude and motivation, the examples of discretion as performed within Sustainable Routes may be seen outcomes of the relational assemblage which constitutes implementation practice. This represents an avenue for future research on policy implementation using a practice theoretical lens.

Third, the collaborative methods used in this paper suggests that practice theory is not only valuable as a framework for analysing data, but can help to engage policy practitioners in ongoing reflection. Co-creating diagrams with interviewees helped to uncover aspects of practices which did not readily emerge from interviews. At first, discussions tended to focus on the meanings associated with the project, such as stress brought about by audits and institutional change. The three-element model then initiated discussions on how new and existing skills had been developed and applied, and how material elements such as bicycles and guidance documents became focal points, around which meanings evolved. These findings concur with Nicolini's observation that practitioners 'are always thirsty for descriptions of their daily practical concerns' [21]. For future social scientific research on the practices of policy officials, this not only indicates the value of the three-element model as an interview aid, but also a potential means of integrating social theory into policy discourse [67].

Finally, in deconstructing notions such as scale and power, practice theory challenges taken-for-granted 'levels' of governance. Encouraging close analysis of raw data, this approach allows the researcher to trace the flows of power and influence from the ground up [22]. In this paper, auto-ethnographical data provided an intimate view into the tensions and struggles between Sustainable Routes actors, zooming in on the ways that meanings, materials and competences were shared and exchanged [50]. It is from these relational dynamics that large-scale phenomena, such as policy implementation, emerge. While MLG suggests that relationships between actors are often 'non-hierarchical' [24], it is through a close attention to implementation as practice that the precise character of these interwoven relationships becomes clear. Close analysis of Sustainable Routes showed that at times these relationships were characterised by the top-down wielding of power, while at others, inter-actor dynamics involved multi-directional exchanges. In all cases, it is through the recruitment of elements in connected performances that such dynamics were played out.

Contributing to the debate over the use of practice theory to research large-scale phenomena, this empirical account has used its associated analytical tools experimentally, to demonstrate the potential of practice theory for analysing multi-actor, multi-scalar research data. The three-element model has uncovered a variety of insights, diagrammatically portraying the flows and exchanges of meanings,

materials and competences, carried by individuals in bundles of practice-performances, traversing time, space and scale, in *connected situations* [21]. With no shortage of energy related phenomena spanning spatial and temporal scales, further exploration of this potential, including the development of new theoretical tools, represents an avenue for future research.

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