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Expertise and Independent Regulatory Agencies: Empirical evidence from the UK Office of Communications

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Abstract

It is often argued that the autonomy and reputation of regulatory agencies depend on their expertise. Yet the studies on how independent regulatory agencies (IRAs) create and deploy their knowledge capacity are few and far apart. Normatively, the justification for delegating decision-making powers to IRAs is that they operate by using technical analysis rather than political considerations. But again, although delegation has been discussed as a design principle, systematic evidence on the conditions under which IRAs make use of knowledge and how is still scarce. This paper is thus meant as an empirical contribution to explore the question of the role of expertise in these organisations. It does so by building on the insights of the knowledge utilization literature, and develops a typology to investigate four possible usages of expertise by an IRA: instrumental (i.e., to solve problems); strategic (e.g. to advocate a position); symbolic (e.g., to gain legitimacy), and non-use. We aim to explain under which conditions a certain usage of expertise is more likely to occur. To appraise our hypotheses, we perform a case study on the regulation of Next Generation Networks (NGNs) by the UK Office of Communications (Ofcom). Covering a policy dossier that stretches between 2004 and 2010, this episode shows how knowledge usages evolve through time, in line with the dynamic nature of the policy process. In this particular instance, we observe a shift from an instrumental use of knowledge geared towards learning to a symbolic use of expertise.

1. Introduction to the research question and literature review

The liberalization and privatization of key economic industries, re-regulation, and structural reforms of public administration in Europe, North America and in several developing countries have led to the growing diffusion of appointed regulatory bodies (Coen and Thatcher 2005; Gilardi 2005; Pollitt et al. 2001, 2004; Thatcher 2005), also known as Independent Regulatory Agencies (IRAs).¹ Assigning regulatory powers to unelected bodies at arm's length from parent Ministries raises issues of legitimacy and accountability, two demands that knowledge and expertise can partially meet.² As often argued in the literature (e.g., Majone 1996; Vibert 2007), the legitimacy of IRAs is contingent - among other things - on the proper use of expertise and the robustness of the technical rationale behind regulatory policy-making.

Yet, while the literature analyses IRAs from several perspectives (e.g. organisational theories, theories of the policy process, neo-institutionalism), and addresses questions ranging from the delegation of regulatory powers (Doehler 2002; Franchino 2002; Gilardi 2002, 2007; McNamara 2002; Shapiro 2002; Thatcher 2002, 2005) to the relationship between the agency and its political principals (Majone 2001; McCubbins et al. 1987; Miller 2005), the role of expertise within these organisations remains under-explored, with some notable exceptions (e.g., McGarity 1991; Morgenstern 1997; Premfors 1984, 1991; Sjørgen 2006). This is somewhat puzzling, given the role attributed to knowledge for the functioning and credibility of IRAs.

On the other hand, the question of the role of knowledge in policy-making has been extensively discussed in a dedicated stream of literature within the political science discipline: knowledge utilization (Boswell 2006, 2009; Feldman and March 1981; Heller 1986; Hertin et al. 2008; Radaelli 1995; Weiss 1977, 1979, 1986, 1999; Wittrock 1991). While a comprehensive review of such literature falls beyond the scope of this paper, authors consistently highlight two points: knowledge seldom has a direct impact on a given policy (Morgenstern 1997; Premfors 1984, 1991; Weiss 1986; Wittrock 1991), and it can play different functions - or better - it can be used

¹ An IRA can be defined as “a body with its own powers and responsibilities given under public law, which is organizationally separated from ministries and is neither directly elected nor managed by elected officials” (Thatcher 2002:956).

² Following Boswell (2009:30), knowledge/expertise is intended here as the product of academic research, distinguished from practical and lay knowledge by the following criteria: to be qualified as such, (research) knowledge must conform to a set of standards commonly accepted in most research disciplines, and it should have been produced by people holding certain qualifications and that are normally affiliated to specific institutions such as academia, think tanks, and dedicated research departments in government or agencies. For a complete review of the different types of knowledge that can be used in policy-making see Weiss (1991), Albæk (1995), and Morgenstern (1997).

in different ways by policy-makers (Boswell 2006, 2009; Hertin et al. 2008; Radaelli 1995, 2009; Weiss 1986, 1999) and not only to inform policy decisions as is commonly assumed. This second insight is particularly relevant for modern regulatory states and their institutions, such as IRAs, given the growing emphasis on the role of evidence in policy-making (e.g., Baldwin 2005; European Commission 2001, 2005, 2010; Hahn and Tetlock 2008; Meuwese 2008; Radaelli 2009).

Against this background, this paper draws on the notion of explanatory typologies (Elman 2005) to offer a theoretical and empirical contribution on the role of expertise in IRAs. In particular, we aim to explain under which conditions a certain usage of expertise is more likely to occur. Our approach was informed by a pragmatic perspective that has been recently advocated by scholars such as Sil and Katzenstein (2010). This allows us to draw on the insights of different theoretical perspectives in a sort of “analytic eclecticism” (Sil and Katzenstein 2010:2). In particular, we employ the insights of Erving Goffman’s theories on the dramaturgical aspect of social interactions (Goffman 1959) and on the framing of events (Goffman 1974) that have already proven their value for the analysis of social organisations such as enterprises. This allowed us to better analyse the different narratives provided by the various actors involved in the NGN case. In this approach, we follow the steps of Jones and McBeth (2010; Shanahan, Jones and McBeth 2011) and their “Narrative Policy Framework”. We believe that such analytic eclecticism provides a sounder basis to connect different types of research questions like those covered in the literature on IRAs and knowledge utilization.

One caveat before we proceed: our typology is not meant as tool to systematically predict which type of knowledge usage will occur in a given agency; it rather intends to shed light on the mechanisms that can drive knowledge utilization under certain conditions.

The remainder of this paper proceeds as follows. Section two introduces the dependent variable, i.e. the use of knowledge/expertise by IRAs. Section three presents an explanatory typology detailing how certain scope conditions are likely to lead to a given use of knowledge. Section four discusses the case selection and the methodology used for the empirical part of the research. Section five briefly introduces the organization under examination; section six and

seven apply the proposed typology to the regulation of Next Generation Networks (NGNs)³ in the United Kingdom; while section eight concludes.

2. The dependent variable: the use of knowledge by IRAs

In what follows we use a classification of the possible uses of expertise based on the findings of the knowledge utilization literature.⁴ Specifically, we identify four types of knowledge usages that can be observed in policy-making. For each type of use, a set of *prima facie* indicators (May 1992) is also included to guide empirical research.

Instrumental use: this usage occurs when an agency turns to knowledge to perform specific tasks. This approach is the one normally associated to “rational” accounts of the policy process (Caplan 1979; Weiss 1979) and rests on the assumption that once policy problems are identified, knowledge is the means to select the best solution for the issue at stake. The instrumental approach has both a short and long term rationale: in the former case, knowledge is used by an IRA to deliver specific outputs in line with the goals the agency assigned itself or that it received from its political principals. In the long run instead, knowledge is used to improve the agency’s problem-solving capacity (Boswell 2006, 2009; Weiss 1979:427-428) or, in other words, to learn (Radaelli 2009). Possible indicators of the occurrence of an instrumental use of knowledge are a balanced distribution of resources allocated to appraisal across the policy cycle, as well as the existence of internal mechanisms for monitoring and evaluating the production and use of expertise.

Strategic use: this usage can be further divided into two sub-categories: political and substantiating. The political strategic use of knowledge is related to the position of the agency in the policy arena and depends on the context and the actors facing the agency (Sabatier 1999, 2007; Sabatier and Jenkins-Smith 1993). The rationale behind this approach derives from an agency’s need to respond to specific controls and pressure mechanisms (e.g., judicial review, yearly allocation of budgets) from political principals and regulatees. Instead, the strategic

³ Ofcom defines NGN as “an upgrade to the core or “backbone” part of the network (http://stakeholders.ofcom.org.uk/consultations/nga_future_broadband/glossary), and as an “IP network capable of being used for both voice and data, and in which there is some control over quality of service. The key features of an NGN are that it is a packet-based, multi-service network, which has a clear separation of transport and control, and where the control functions may reside on a physically separate network” (Ofcom 2009: 84).

⁴ I owe most of this classification to Boswell (2006, 2009) who provides a comprehensive synthesis of previous scholarly efforts to identify a taxonomy of knowledge utilization.

substantiating typology (Boswell 2006, 2009) is linked to the content of policies and less to the political environment where these are devised. Typically, an agency adopts a strategic substantiating use of knowledge to justify and support a predetermined/preferred policy solution (Haas 2004: 573) or as ammunition against opposing views in an adversarial context (Boswell 2006; Sabatier 1999, 2007; Sabatier and Jenkins-Smith 1993). The use of expertise to respond to external needs rather than internal ones (e.g., when analyses are mostly produced in view of confrontation with stakeholders) can be an indicator of a strategic use of knowledge.

Symbolic use: in this case, knowledge usage is driven by a logic of appropriateness (Goffman 1959). Hence, knowledge mainly serves the purpose of gaining legitimacy vis-à-vis other policy actors (Boswell 2006, 2009): it could help the agency to prove its competence and rationality (Radaelli 1995: 162), and to respond to external expectations and pressures to conform to a specific trend within its policy sector, as depicted in the literature on isomorphism (Di Maggio and Powell 1983).⁵ A symbolic use of expertise can also play a protective function when an agency is not acting on a specific policy issue but still wants/needs to signal that something is being done about it (Hertin et al. 2008). As a result, this particular usage can be decoupled from a specific policy decision. Potential indicators of a symbolic use could be a visible imbalance between produced knowledge and the real informational needs of the agency, or the excessive use of one type of knowledge among the range of expertise that is normally necessary for decision-making (e.g., the agency allocates most of its resources to literature reviews).

Non-use: here we refer to cases where expertise is available but the agency decides not to rely on it as a basis for decision-making. This could happen because available knowledge would damage a preferred policy option that was already chosen or is the only viable one in political terms.⁶ The non-use of knowledge could also occur when an IRA is bound by the electoral commitments of the principal and thus available expertise does not really play a role in policy-making. Finally, a third motivation could be that decision-making patterns and existing approaches to tackle a given policy issue are so entrenched in an agency that expertise is not used for the purpose of decision-making. In this case, the absence of any reference to expertise in the final decision

⁵ For instance, if other agencies in the same sector routinely perform economic analyses, a newcomer is pressured to adopt a similar behaviour to be accepted as a credible player in the policy arena and may thus turn to a symbolic use of knowledge whenever it lacks the internal resources to adopt one of the other typologies of knowledge utilization.

⁶ In fact, the non-use of knowledge could be seen as another example of strategic use (see above); however, as it results in a negative action, it is classified separately.

and/or the clear identification of other means to tackle a policy problem are potential indicators of a non-use of available knowledge.

The uses of knowledge outlined above, their rationale and preliminary indicators are summarised in the table below.

Table 1- Types of knowledge utilization by IRAs, microfoundations, and indicators

Type	Micro-foundations An agency uses knowledge to:	Indicators
Instrumental	<ul style="list-style-type: none"> → Carry out assigned tasks/mandate → Improve own problem-solving abilities (e.g., problem-solving in Boswell 2006 and partially interactive model by C.H Weiss (1979: 427-428) → Increase understanding of an issue (enlightenment model/ conceptual use Weiss C. H. 1979: 430 and 1999: 477) and to learn (Owens et al. 2004) 	Optimal use of resources allocated to appraisal across the policy cycle
Symbolic	<ul style="list-style-type: none"> → Gain legitimacy (e.g., prove own rationality and competence, Radaelli 1995:162) → Emulate similar structures and respond to expectations or external pressures → Signal political responses to perceived policy problem, in absence of actual measures (Hertin et al., 2008) 	Imbalance between produced knowledge and the real informational needs of the agency; excessive focus on one type of knowledge
Strategic	<ul style="list-style-type: none"> → Respond to control by principal(s), the judiciary or regulatees (tactical model, Weiss C.H.1979:429) 	Production and use of knowledge to respond to external needs rather than internal ones, for example in confrontation with stakeholders
a) <i>Political</i>	<ul style="list-style-type: none"> → Expand own power/leverage (C.H. Weiss' tactical model; Boswell 2006: 7) 	
b) <i>Substantiating</i>	<ul style="list-style-type: none"> → Justify a preferred/predetermined policy choice → Use as ammunition in adversarial context (Weiss C.H.1979: 429) 	
Non-use	<ul style="list-style-type: none"> → Avoid undermining preferred policy option → Avoid taking explicit stance on emotional or uncertain policy issue 	Absence of knowledge in decision-making; clearly identifiable use of other means to tackle policy problems

Source: Elaboration on Schrefler (2010: 320).

These four uses are not mutually exclusive and can coexist within the same organisation depending on the circumstances. Hence, this paper focuses on the scope conditions under which each use is likely to occur.

3. An explanatory typology

To map the scope conditions leading to one of the four uses of knowledge described above, we draw on the methodological device of explanatory typologies (Elman 2005)⁷ using the following dimensions: *conflict* - intended as the degree of disagreement over policy values and goals between the actors of a policy environment (Radaelli and Dente 1996; Sabatier 1999, 2007; Sabatier and Jenkins-Smith 1993) and *problem tractability*, viewed as a continuum stretching from policy issues that can be routinely addressed with available expertise to complex problems for which existing knowledge does not provide any solution or where the medium and long term consequences of policy approaches are unknown or risky (Boswell 2006; Morgenstern 1997).

As regards the measurement of these two explanatory dimensions, the level of conflict is normally related to the number of stakeholders involved in policy-making: the higher the number of players, the greater the number of potentially conflicting demands and pressures for the agency (Brunsson 1989; Sabatier 1999, 2007; Sabatier and Jenkins-Smith 1993). The formal arrangements and power distribution between the agency and its principals also represent a crucial indicator of the level of conflict, in particular as far as control mechanisms and sanctions are concerned (Hall et al. 2001; McCubbins et al. 1987): stringent oversight mechanisms and the presence of multiple principals are likely to push the agency into adopting strategic behaviors to cope with the external environment (Vogel 1996: 91).

Potential indicators of the degree of problem tractability are the existence of epistemic communities (Haas 1992) having established a certain amount of cumulated knowledge on the policy issue at stake; the existence of commonly accepted standards and models to tackle a given policy problem (Haas 1992: 11); and the magnitude of the uncertainty on the medium and long term consequences of possible policy solutions (Morgenstern 1997).⁸

⁷ Explanatory typologies are based on theories that provide expectations on causality as well as ways to measure a selected dependent variable. As shown by Elman (2005: 296), typologies can be graphically represented by the means of a table (or property space) where each cell corresponds to the explanation of a possible outcome and thus can be traced back to the theoretical micro-foundations connecting the independent variables with the dependent one (Coleman 1990). The dimensions of the property space (i.e. the rows and arrows) reflect the alternative values of the independent variables of the theory under exam, and allow to make predictions based on the various combinations of the different values of the theory's independent variables (Elman 2005: 297).

⁸For an operationalization of the role of problem tractability in the case of regulatory policies, see William T. Gormley (1986) and for other types of policies (Eshbaugh-Soha 2006).

As a result, the combination of the two explanatory dimensions leads us to formulate four hypotheses on knowledge utilization by an IRA.

When the level of conflict in the policy arena is low (e.g., stakeholders involved are few and with compatible interests and/or the power and competences of the agency are clear and difficult to challenge), and the degree of tractability of the policy problem with the existing knowledge is high, then one should expect the agency to use knowledge instrumentally to perform its tasks. Given the high tractability of the problem, knowledge utilization should be expected to follow a “routinized” pattern, subject to limited questioning from relevant stakeholders (Jennings and Hall 2011; C.H. Weiss 1991), with knowledge often applied to the solution of short-term issues, or in other words for “rational” problem-solving.

H1: a low level of conflict and high problem tractability lead to an instrumental use of knowledge.

When the level of tractability of the problem at stake is high but so is the level of conflict in the policy arena, one should expect a strategic use of knowledge to occur. Under these conditions, knowledge can be particularly effective as ammunition against other stakeholders or institutions questioning the power of the IRA, or as a tool to support the agency’s choices in the presence of oversight mechanisms and judicial review (strategic political use). Knowledge can also be used to advocate a preferred policy solution in the face of alternative options proposed by other stakeholders (strategic substantiating use).

H2: a high level of conflict and high problem tractability lead to a strategic use of knowledge.

When the level of conflict is high and the tractability of the policy problem at hand is low (i.e., there is no available or broadly accepted knowledge on the issue or no technical model to address the long-term consequences of available policy solutions), one should expect either a non-use of knowledge or a symbolic use. In the former case, the agency is stuck with no possibility of moving in any direction because of the sustained levels of conflict in the policy arena and the lack of real answers to the policy problem under examination. However, if the level of conflict results in pressure and expectations for the IRAs to unblock the situation, in the

absence of adequate knowledge, the agency could be expected to use knowledge symbolically to partially respond to external demands without pursuing any concrete action for addressing the problem at hand.⁹

H3: a high level of conflict and low problem tractability lead to a symbolic use of knowledge or to non-use.

When the level of problem tractability is low and so is the conflict in the policy arena, we expect the agency to use knowledge instrumentally to increase its problem-solving ability in the long term. One could object that the low pressure put on the agency in this case could also lead to the non-use of knowledge; however, it is commonly assumed that the very credibility of an agency depends on its ability to tackle policy problems: low levels of conflict provide ideal conditions for using knowledge instrumentally to learn and strengthen the agency's future coping skills. Hence, we assume that under these circumstances, the instrumental use will be dominant.

H4: a low level of conflict and low problem tractability lead to an instrumental use (in the learning sense) of knowledge.

These four hypotheses are illustrated in the figure below.

⁹ For instance, if the production and use of knowledge is formally requested from the agency, one could observe the classical "box-ticking exercise" where knowledge utilization conforms to the rulebook but has little connection with the real decision-making needs of the IRA.

Figure 1: hypotheses on knowledge utilization by IRAs

		<i>Level of tractability</i>	
		HIGH	LOW
<i>Level of conflict</i>	LOW	<p><i>H₁</i> Instrumental/problem-solving</p>	<p><i>H₄</i> Instrumental/learning use</p>
	HIGH	<p><i>H₂</i> Strategic use</p>	<p><i>H₃</i> Symbolic use/non use</p>

Source: Elaboration of Schrefler (2010:321)

Additional control variables to be included in the explanatory typology are the capacity of the agency in terms of human and financial resources, and the saliency of the problem at stake.¹⁰ However, these control variables need not be explicitly incorporated in the typology, as they merely tend to qualify or strengthen the hypotheses generated by combining the two dimensions described above. In fact, issue saliency is directly connected to the scope of conflict, as a highly visible policy issue will tend to increase the degree of conflict by extending its scope to include actors who are traditionally not part of the policy field under exam. As a result, highly salient issues may reinforce the strategic dimension of knowledge utilization. Conversely, the capacity of the agency is closely linked to problem tractability and will influence the agency's choice as regards relying on internal versus external expertise. A limited capacity strengthens symbolic uses, where expertise is decoupled from decision-making.

4. Case selection and methodology

The empirical part of this paper focuses on the role of expertise¹¹ in the decision-making process of the UK Office of Communications (Ofcom). As mentioned, the use of knowledge by regulatory agencies is still under-tested, particularly in the case of European IRAs, due to their relatively short existence. However, in the sector of telecommunications, IRAs were created more than a decade ago, their functioning has been observed, and comparability between

¹⁰ For a thorough analysis of the role of issue saliency in regulatory policies, see Gormley (1986).

¹¹ In this particular case, we focus on economic expertise and, to a lesser extent, on technical expertise (engineering).

agencies is already established in the literature (Thatcher 2002, 2005, 2007). Moreover, the United Kingdom was the first EU member state to liberalize its telecommunications industry and to establish an independent regulator in 1984. The UK is also at the forefront in the adoption of an evidence-based approach to policy-making; hence, findings on the link between knowledge and policy will be less affected by strategies to embed the use of expertise in a policy-process initially built on different mechanisms. In this respect, Ofcom is no exception in the UK context: the agency has a statutory duty to perform impact assessments¹² and to document the evidence used in decision-making. Hence, we appraise two hypotheses of the proposed typology with a case study on the regulation of Next Generation Networks in the UK.¹³ Covering a policy dossier that stretches between 2004 and 2010, this episode was selected to show how knowledge usages evolve through time, in line with the dynamic nature of the policy process. In this particular instance, we observe a shift from an instrumental use of knowledge geared towards learning to a symbolic use of expertise.

In terms of methodology, we use a qualitative approach based on historical process tracing (e.g., Checkel 2007), qualitative coding¹⁴ of relevant documents (e.g. Ofcom’s impact assessments and regulatory statements, other official documents, individual responses to consultations and other stakeholder input, etc.), and 6 targeted interviews. This choice fits the research question under examination, as our purpose is to shed light on the mechanisms and the scope conditions leading to a given use of knowledge, and requires an in-depth understanding of the institutional, organisational, and political context in which a regulatory decision is taken.

5. An overview of Ofcom’s mandate and structure.

Ofcom replaces the previous UK regulator for telecommunications (Oftel) since the Communications Act of 2003. The agency is in charge of communications industries, and its mandate covers television, radio, telecommunications and wireless communications services, both in terms of content and infrastructure and, since 2011, postal services. Under the 1998 Competition Act, Ofcom has also concurrent powers with the Office of Fair Trading (OFT) for

¹² http://www.ofcom.org.uk/consult/policy_making/

¹³ This episode is part of a series of case studies on Ofcom performed by Schrefler (forthcoming) for her doctoral dissertation.

¹⁴ To systematize our work and keep track of the different stages of analysis, test potential relationships between variables, identify patterns, uncover mechanisms and their direction, we used the NVivo software, which provides a complete and user-friendly system for qualitative text analysis.

anti-competitive behaviour in broadcasting, spectrum and telecommunications, and for the application of Articles 101 and 102 of the EU Treaty.

In legal terms, Ofcom is a statutory corporation established by the Office of Communications Act 2002, while its primary duties are specified in the Communications Act of 2003. The latter is the transposition into UK legislation of the second EU “telecoms package” of 2002.

As regards the agency’s position in the institutional arena, Ofcom’s responsibilities fall in the remit of two separate Ministries: the Department for Business, Innovation and Skills (BIS), and the Department for Culture, Media and Sport (DCMS). In addition, the Treasury determines Ofcom’s annual spending,¹⁵ and the agency must report to Parliament annually, and is subject to inspection by the National Audit Office. Ofcom is subject to judicial review by the Competition Appeals Tribunal (CAT).¹⁶ For cases raising a price control matter, the CAT must refer the matter to the Competition Commission before reaching its decision. Judicial review and appeals by regulatees hold a prominent position in Ofcom’s activities.

In terms of structure, Ofcom is governed by a Board of executive (including the Chief Executive) and part-time members (including the Chairman) who oversee a series of committee and advisory bodies. This structure replaces Oftel’s governance by a Director-General with sole decision-making powers and is intended to mirror the boards of the companies that Ofcom regulates. In terms of expertise, Ofcom has a strong pool of economists, lawyers, engineers, statisticians and finance experts.

6. An empirical application: the regulation of NGNs

As mentioned, our case study covers the evolution of the NGN debate since 2004-2005, when British Telecommunications (BT) first announced its intention to fully replace the existing telecoms network (i.e., the old public switched network, also known as PSTN) with a Next-Generation infrastructure based on the Internet Protocol (IP) called 21CN (i.e., 21st Century

¹⁵ As foreseen in the Communications Act, Ofcom raises its funds from the sectors it regulates, and specifically from: television broadcast licence fees; radio broadcast licence fees; administrative charges for electronic networks and services and the provision of broadcasting and associated facilities; funds in the form of grant-in-aid from the Department for Business, Innovation and Skills. In 2010-2011, the agency’s operating budget was £ 127.5 million, 3.6% lower in real terms than the previous year (Ofcom 2010).

¹⁶ The Competition Appeal Tribunal is an independent judicial body established to hear appeals against certain decisions of the UK competition and sectoral regulatory authorities made under the Competition Act 1998, the Enterprise Act 2002 and the Communications Act 2003. For further details <http://www.catribunal.org.uk/>

Network). From the very beginning, this dossier attracted a lot of attention in the telecoms policy community, as NGNs are among the most challenging and disruptive market changes for the regulator and the industry. There was however widespread agreement on the fact that NGNs would eventually deliver considerable benefits to consumers and the sector as a whole. Yet, around 2008, technical difficulties, the global financial crisis, and a sudden political attention for superfast broadband deployment, turned NGNs into a low priority on the agenda.

Prima facie, the NGN debate between 2004 and 2010 seems to move from a state of low problem tractability and limited but potentially explosive conflict to a combination of low tractability and high conflict. Hence, we will appraise two hypotheses: the first on instrumental learning (H4) for the timeframe between 2005 and 2008, and the second on the symbolic or non-use of economic analysis (H3) between 2008 and the 2010 Statement on NGNs.

6.1 The first phase: 2004-2008

Following BT's announcement on 21CN in June 2004, Ofcom decided to adopt an exploratory approach, as shown by the official Consultation documents and the Statement of that period.¹⁷ The first Consultation was published towards the end of 2004 and aimed at gaining a better understanding of the regulatory and competitive implications of BT's NGN project. Ofcom made clear that its main objective was to provide clarity on the policy requirements needed to ensure competition, particularly on access and interconnection to BT's network. Without interfering in BT's and other communication providers' plans, Ofcom wanted to guarantee that market players were aware of the constraints within which they were to design their networks. Ofcom also clarified the key policy principles it intended to apply¹⁸ to stimulate the debate on how to

¹⁷ "Next Generation Networks - Future arrangements for access and interconnection" (Consultation, 2004), available at: <http://stakeholders.ofcom.org.uk/consultations/ngn/>, responses available at: <http://stakeholders.ofcom.org.uk/consultations/ngn/?showResponses=true>; "Next Generation Networks: Further consultation" (2005) available at: <http://stakeholders.ofcom.org.uk/consultations/nxgnfc/>, with responses available at: <http://stakeholders.ofcom.org.uk/consultations/nxgnfc/?showResponses=true>; and the Statement "Next Generation Networks: Developing the regulatory framework" (March 2006), available at: <http://stakeholders.ofcom.org.uk/binaries/consultations/nxgnfc/statement/ngnstatement.pdf>.

¹⁸ These principles were those developed in the previous Strategic Review of the Telecoms Market and state that Ofcom should: 1. promote competition at the deepest levels of infrastructure where it will be effective and sustainable; 2. focus regulation to deliver equality of access beyond those levels; 3. as soon as competitive conditions allow, withdraw from regulation at other levels; 4. promote a favourable climate for efficient and timely investment and stimulate innovation, in particular by ensuring a consistent and transparent regulatory approach; 5. accommodate varying regulatory solutions for different products and where appropriate, different geographies; 6. create scope for market entry that could, over time, remove economic bottlenecks; and 7. in the wider communications value chain, unless there are enduring bottlenecks, adopt light-touch economic regulation based on competition law and the promotion of interoperability (Ofcom 2004:3).

implement them, but stressed that it had no intention of detailing a preferred policy solution at that point.

The exploratory tone of the Consultation¹⁹ signals that problem tractability was quite low: many issues were technical in nature, and the future evolution of BT's plan and the reaction of its competitors could not be fully apprehended. Low problem tractability is also reflected in the 72 questions included in the Consultation, an unusually high number when compared to other Ofcom cases reviewed by Schrefler (forthcoming). As regards the level of conflict, there were potentially clashing interests between market players, and a fear that BT could re-monopolize infrastructure. However, Ofcom also viewed NGNs as a potential solution to existing technological bottlenecks, thus solving some persistent conflicts in the market.

Responses were submitted by 22 stakeholders representing different types of organisations, ranging from industry to local government. Overall, with some exceptions, stakeholders only covered the questions that were relevant to their case, and most commented on the general policy principles outlined by Ofcom. No Statement was issued at the end of this process. Instead, Ofcom published a second Consultation document in 2005 and commissioned an external study to investigate the possible role of a new and dedicated NGN body²⁰ to oversee the transition process to NGNs.²¹

The second Consultation aimed at providing a response to the regulatory issues emerged in 2004 and establish a regulatory framework to address them. Specifically, Ofcom put forward 18 questions on a series of policy principles and processes to that effect. At the same time, Ofcom re-confirmed its intention to avoid micromanaging the move to NGNs, which would remain an industry-driven process. In this new document, the issues raised in the first Consultation are still described as uncertain (i.e., low tractability) and any specific decision by Ofcom as premature. Essentially, Ofcom's goal remained to deliver regulatory certainty to market players wishing to embark on the NGN adventure without adopting a regulatory decision. 22

¹⁹ For example, Ofcom explains (2004: 14): 'The scope of this consultation is necessarily very wide. Given this wide remit, the current focus is on identifying issues, and guiding principles for their resolution, rather than on presenting particular solutions. Solutions are more likely to be effective if they are determined by industry, through a process of commercial negotiation, than if they are determined by regulatory intervention.'

²⁰ Known as NGNuk. For further details: <http://www.ngnuk.org.uk/>

²¹ At the time, the regulator and market players assumed that the existing PSTN network would be gradually replaced by 21CN, in several "migration waves" to be completed around 2012.

stakeholders responded to the Consultation, and eventually the regulatory statement “Next Generation Networks: Developing the regulatory framework” was published in March 2006. Most of our interviewees describe it as a “high-level policy piece” establishing general and broad principles but no concrete proposal, besides the creation of NGNUK. As a matter of fact, the Statement does not contain a regulatory impact assessment precisely because no regulatory proposal is being considered. For the purposes of our analysis, the two Consultations described above and the 2006 Statement can be seen as the conclusion of the first phase of the NGN case. In a way, this view is shared by our interviewees and supported by the ensuing turn of events.

When asked to compare the 2008-2010 phase with the 2004-2008 period, each and every interviewee replied something along the lines of “things did not work out as planned”: BT’s slowed down its 21CN roll-out programme and signaled very explicitly that it would not be able to provide information on its plans beyond 18 months periods (instead of the 3-5 years initially envisaged when the 21CN project was launched). While two operators - Talk Talk and Sky - had already built their own NGN network, also on the assumption that BT would complete 21CN, other players in the market had adopted different strategies and were now faced with the need to rethink their priorities too. One thing was certain though, new and legacy networks would keep coexisting for a longer period of time, opening a whole series of new issues that could alter the nature of problem tractability and the level of conflict in the policy arena.

The other uncontested element in this scenario is that the combined effect of growing demand for superfast broadband, political pressure, and limited access to finance after the 2008-2009 crisis made investment in Next Generation Access Networks (NGANs)²² the new priority for many communication providers, including BT. This move looked more attractive, *i.a.*, because NGANs are expected to bring return on investment in a shorter time span than NGNs and tend to be less subject to demand uncertainty.²³ All in all, this sounds like a death row for NGNs. It is from that point in time that the second part of our case study starts.

²² Defined by the European Commission as: “wired access networks which consist wholly or in part of optical elements and which are capable of delivering broadband access services with enhanced characteristics (such as higher throughput) as compared to those provided over already existing copper networks”. See: http://europa.eu/legislation_summaries/information_society/strategies/sio018_en.htm#key

²³ On this point, see Cave and Martin (2010), and Ofcom’s 2009 Consultation document.

6.2 The second phase 2008-2010

This turn of events led Ofcom to launch a third Consultation in July 2009 to take stock of the situation and explore the implications of BT's change of plans. The title of the Consultation document - *“Next Generation Networks: Responding to recent developments to protect consumers, promote effective competition and secure efficient investment”* - speaks for itself.²⁴ Starting from the premise that “it now seems more likely that NGNs will be adopted gradually, forming part of the wider evolution of network technologies, and with many opportunities for changes in direction along the way” (Ofcom 2009: 1), the Consultation aims at achieving two objectives: 1) outlining Ofcom's response to the recent changes in BT's 21CN, and 2) update stakeholders on the agency's thinking as regards consumer protection issues in the new scenario. After all, in the previous documents, consumer protection principles were developed under the assumption that a mass migration to NGNs would occur, something that is not likely to materialize in the coming years. Against this background, Ofcom identified three trends with potentially significant effects on competition and regulation: investments in NGNs; growth in mobile data services; and an increased use of software based communications services (such as Voice over IP). The Consultation document also contains a chapter and a series of questions on the longer term implications of a widespread adoption of NGNs, and asks feedback on whether there is anything that the regulator should do today “to cater for this future world”. The tone of the Consultation is again exploratory, as shown also in the way more technical questions (e.g., interconnection arrangements) are treated. When present, economic analysis often consists of “hypothetical” reasoning on a set of different scenarios.

The 16 Consultation questions stretch from general topics on the evolution of competition models in the next 3-5 years, to general consumer protection principles, long-term trends, and more specific issues such as interconnection arrangements between IP and TDM²⁵ networks, the development of certain wholesale products, and the compatibility of telecare and alarm equipment with the new NGN infrastructure. Twenty-three stakeholders, including some individuals, submitted a contribution. Not all respondents coincide with those of the previous

²⁴ The official text of the Consultation is available at: <http://stakeholders.ofcom.org.uk/binaries/consultations/ngndevelopments/summary/main.pdf>; and the consultation responses at: <http://stakeholders.ofcom.org.uk/consultations/ngndevelopments/?showResponses=true>.

²⁵ Time Division Multiplexing. Technologies putting multiple data streams in a single signal by separating each signal into many segments, each having a very short duration. Each individual data stream is re-assembled at the destination based on timing. TDM is used to deliver a steady stream of data, particularly digitized voice.

consultation rounds, indicating a slight change in the policy arena's composition. Among respondents, communication providers submitted the more comprehensive contributions, and one can easily distinguish new entrants who had deployed NGNs by 2009 (Talk Talk and Sky) from others, be they legacy operators, or new entrants with no infrastructure.

Trying to summarize all the issues raised by Consultation respondents would not do justice to the variety of the views expressed; however our qualitative text coding allowed us to single out some recurring themes. Specifically, all respondents take BT's change of plans as the starting point of their contribution, although views on whether the move away from the 21CN project is a positive or negative development vary. Supporters of broadband deployment (e.g., BBBritain) consider this change of plans as a more meaningful allocation of resources. Instead, those who have invested in NGNs or based their business models assuming a timely roll-out of 21 CN describe the current situation as a waste of time and efforts (e.g., Cable & Wireless). All views converge on the fact that problem tractability is low, although some indicate that this time the regulator has stronger grounds for acting than in 2004-2005, as the new nature of problems is likely to remain stable for a certain number of years. In fact, problem tractability is linked to two of the most recurring and problematic themes of the Consultation.

The first problematic question is whether NGN technology should be considered as "proven" (i.e., the most efficient to deliver a given service) or not. Deciding on this point is crucial, as when a technology is proven, Ofcom must use it as a basis in the cost models and economic analyses underpinning regulatory decisions.²⁶ As we will see, deciding on this aspect also sheds light on how Ofcom perceives its role as well as on the expectations of external actors.

In 2009, Ofcom did not consider NGN as the most efficient/proven technology for voice services, and thus developed a model to calculate charges to be levied between operators on the basis of the old TDM technology. This placed different incentives on providers, depending on whether they were new entrants or owners of a legacy network. In turn, this issue is directly related to a second and, possibly, the less tractable question of the Consultation: interconnection between legacy and IP networks. This question can in fact be separated in two different parts: a) who should be responsible for physically converting, let us say a telephone call, from BT's old network to an NGN-based one or vice-versa, and b) who should bear the cost of such operation.

²⁶ This approach stems from recommendations at the EU level and from the results of recent judicial review cases in the UK.

The content of the Consultation responses is also closely linked to our second explanatory variable, the level of conflict in the policy arena. While one of the main points of contention is again on interconnection arrangements, conflict remains distinct from problem tractability. In the case of problem tractability, interconnection is expressed in terms of what the most appropriate regulatory strategy would be. In turn, this question is linked to the broader issue of whether Ofcom should incentivize a faster move to NGNs, or instead let the market take care of things. Conversely, when looking at interconnection from a conflict perspective, the focus moves to the different commercial strategies and business models of market players. This distinction is further strengthened by the fact that, since the beginning of the NGN debate in 2004, Ofcom decided to leave the design of interconnection arrangements to commercial negotiations. Whether this approach was still appropriate under the new circumstances is indeed at the core of the 2009 Consultation responses and may explain the apparent convergence of our two explanatory variables: in the face of changed conditions, market players move the object of conflict back to the regulator's table, by reframing the issue in terms of the regulator's role in promoting/not promoting NGNs. In fact, most respondents stressed that commercial negotiations were not working and asked the regulator to provide a stronger framework and guidance. Some (e.g., BSIA, ENA) also requested a new forum to debate other NGN related issues.

Another point of conflict raised in the Consultation is the future development of (new) wholesale products provided by BT to its competitors to serve their customers, with several respondents fearing that BT would reduce its offer as soon as such products become unnecessary for BT's NGN infrastructure. Finally, two respondents elaborated more broadly on the significant costs of deploying an NGN and the related risk of greater market concentration and reduced competition.

After reviewing the contributions and some additional in-house work, Ofcom issued its final Statement in January 2010, maintaining its views broadly unchanged. As expected, the Statement does not contain any policy decisions, but rather responds to the points raised during the Consultation, outlines Ofcom's future work plan and concludes that current interconnections arrangements remains appropriate. Finally, it provides additional support to the conclusion that there is no evidence to mandate new wholesale products for the time being.

6.3 Actors' views and narratives

All actors involved in this episode share the view that problem tractability remained low for the whole duration of the NGN debate, even after BT decided to set aside the 21CN project and concentrate on NGNs and superfast broadband deployment. Coded documents and interviews also confirm that the nature of problem tractability changed with time: initially, there was little clarity on the future course of events, and this led the regulator to adopt a “green” approach. Several interviewees viewed Ofcom’s exploratory attitude as an appropriate choice, given the technical and commercial uncertainty surrounding the prospected transition to NGNs and the absence of knowledge/evidence pointing to a clear set of actions. In some instances, the very nature of the problems to be tackled was unclear. Once BT stepped back from rolling out 21CN and it became evident that old and new networks would coexist for some time, a whole series of new questions on interconnection arrangements and on the appropriateness of incentivizing NGN roll-out came to the fore. These issues are undoubtedly more concrete than those surfacing in the beginning of the NGN debate. This however, does not make them automatically more tractable. In fact, these apparently more technical questions bring the debate to a different level, raising problems about the role of the regulator in the market.

The dynamic nature of problem tractability and the expectations it placed on Ofcom are reflected in the sources coded for the 2010 Statement. As always, views differed. For instance, Colt believes that problem tractability was further reduced, given that clarity on what constitutes an efficient operator is bound to diminish in the future.²⁷ For ISTPA instead, following the deployment of NGNs by Talk Talk and Sky, IP technology should be seen as proven (i.e., the most efficient), hence removing doubts on what the regulator should do in terms of interconnection charges. While the underlying question on the proven technology lingered in the background, official documents and interview transcripts indicate that the boundaries of the problems to be addressed were more defined in 2009.

When questioned on problem tractability, Ofcom’s representative focused on the regulator’s intention to provide regulatory clarity, and the difficulty of doing so in a changing context:

²⁷ In 2005, there was widespread agreement that NGNs would be more efficient than current technical solutions. Given the prospected co-existence of old and new networks in the coming years, Colt believes it is increasingly difficult to decide which is the proven/most efficient technology.

So we were doing this work whilst all this was changing, when all these changes were taking place, and the contentious issues that we were trying to deal with were relatively tactical, they were relatively more concerned with how does the fact that BT is now not going to move its core network to NGN, how does that affect its competitors who have moved to NGN, they have to now connect with this...In 2005 I think it's fair to say Ofcom foresaw a brave new world in which networks would be IP within four or five years, costs would fall, new services would be made possible, and so on and so forth, but reality didn't work out that way...I guess our main focus was to try and create a framework that would allow competition to...competitors to continue to invest and BT to continue to invest, and try and strike a balance that allows that to happen, even though the technologies were now rather mixed and the direction of network evolution was rather unclear. So we were anxious and appeared to be anxious not to say what the right answer is. Is the right way to build networks to use IP or is it to use TDM? There isn't a right answer (Interview 1, Ofcom, December 2010).

As mentioned, our two explanatory variables (the level of conflict and problem tractability) revolve around similar points in the NGN case, although the issues concerned are framed differently, at least by the regulator, depending on which variable is at stake. The impression of overlap is mostly created by stakeholders' comments, as for obvious reasons their remarks are phrased in terms of commercial interests: in the face of intractable issues that cannot be answered with traditional economic models (or other types of relevant expertise), prospected profits and losses naturally become the guiding principle to assess the situation. Also, conflicting demands can only be fully articulated when there is clarity on which issues actually constitute sources of conflict. This is reflected in the fact that, in this episode, the level of conflict changes more between 2004 and 2010 than problem tractability. Initially, BT's 21 CN plans were met by communication providers with some (technical and commercial) apprehension rather than with open conflict. The magnitude of the prospected change made its implications difficult to grasp in full. As a result, positions were not fully established around 2005, although it was clear that conflict would eventually concern the different ways of managing transition to an NGN world. With time, BT's change of plans, and NGN deployment by Sky and Talk Talk, opposing teams started to form in the policy arena. According to one Ofcom interviewee (interview of September 2010), as soon as things became clearer, conflict rose as well: NGN became yet another case of zero-sum-game despite the initial hope that in the "brave new world" prospected in 2005 this scenario could be avoided. Another Ofcom interviewee confirms that there is now a lot of conflict potential between BT and Talk Talk on interconnection; however conflict might decrease in the future because "*BT is not doing anything in this area, so issues have become much smaller*" (Interview of December 2010). Interestingly, the Consultation document states that in 2009 there was less pressure on Ofcom to intervene, following BT's decision to focus on

NGANs and the fact that companies that took the NGN route, regardless of the incumbent's plans, remained profitable.

In any event, our coding exercise confirms two things: 1) in 2009 conflict was high and revolving around clearly identified commercial interests and 2) the debate on and political attention for superfast broadband and NGANs visibly affected the case for NGNs, although comments are more or less explicit on the nature of such impact. Specifically, all interviewees stressed that Ofcom's principals (i.e., the Ministerial Departments BSI and DCMS) kept clear of the NGN debate. For some however, the case of superfast broadband is a different story. Some refer to it as a "political priority", others call it "the hot potato" and the underlying message is clear: commercial and/or political considerations generated pressure to focus on NGANs both for BT and the regulator. No one claims that there was a potential for institutional friction on policy priorities between Ofcom and the Ministry; however, the saliency of the broadband dossier was difficult to ignore, as reflected in the following quote:

I think there is consensus in the industry that this is not the complete picture, that there was sort of willingness by the political establishment for BT to be seen to be deploying fibre and to ensure...all the big political words around maintaining the competitiveness of the country in relation to other countries, you get a bit the arms raised mentality between politicians: the other countries deploy fibre and the UK has to although there is probably very little economic justification for rolling-out fibre as quickly as it's being done. But that debate [NGN] has been gone and lost, and now we are where we are... I think NGA deployment is a bigger policy issue on Ofcom plate and presumably a commercial one for BT as well. The key objective for Ofcom is to ensure that BT continues on its fibre access deployment programme (Interview 2, industry, January 2011)

This illustrates the impact of issue saliency in this episode. In Section 3 we explained that high saliency is likely to affect conflict rather than problem tractability, as it normally broadens the size of the policy arena: salient issues attract more attention, hence more actors and potentially conflicting demands in the debate (Gormley 1986; Jennings and Hall 2011; Yesilkagit and van Thiel 2011). This mechanism operated in reverse fashion for NGNs: by becoming a hot topic on the policy agenda, superfast broadband turned NGNs into a lower priority, relieving Ofcom from pressure to act immediately on a difficult dossier. In turn, this created some space for a symbolic or even a non-use of expertise.

7. Knowledge utilization in the NGN case

Overall, the exploratory tone of the official documents produced by Ofcom since 2004 seems to indicate that the agency is interested in learning and in improving its coping skills in

the face of a rather intractable and potentially explosive dossier. This fits with our expectations regarding hypothesis H4 on instrumental learning. That is, until the turning point of this episode (i.e., BT's change of plans), when the internal dynamics of problem tractability and conflict changed. However, despite the new circumstances, the 2009 Consultation and the 2010 Statement remain relatively “green” and exploratory documents, as if circumstances had sent Ofcom back to the drawing board. The 2009 Consultation states explicitly that there is not enough evidence to justify any change in regulation, and the 2010 Statement confirms that:

Respondents offered a wide range of comments on the longer-term evolution of NGNs, whilst acknowledging that this was very uncertain. We have not identified a specific issue for us to address in relation to the longer-term evolution of NGNs following the Consultation (Ofcom 2010a:6).

Also, the regulator is keen to confirm that market solutions are the preferable course of action for the time being, although there is a declared intention to gather additional evidence in the near future to evaluate whether this approach remains appropriate. In other words, Ofcom's official narrative of the NGN case points to an instrumental usage of knowledge, essentially geared to learning (H4). This account matches the impressions of our interviewees for what concern the first part of the debate, and Ofcom's initial approach is openly praised even by some of its most fervent critics:

They effectively adopted a “wait and see” approach...I think that's how it started, and even now it is still not a very detailed policy, it's still quite high level...Therefore, originally at least, interconnection disputes and market definitions did not necessarily need to alter in order for the industry to function. So it was only right that Ofcom would start off with a green approach to NGNs, and try and arrive at a regime that allowed the market and technology to evolve naturally, without Ofcom pre-defining a solution, or setting some sort of regulation that would have prohibited another type of technology from developing...(Interview 4, industry, January 2011)

Transition to NGN was like navigation in uncharted waters, and all seem to accept a certain amount of trial and error and the fact that it would have been premature for Ofcom to take any position in 2004-2005. However, appreciation for the regulator's approach gradually decreased following the progressive crystallization of market players' positions. At the time of the 2009 Consultation, besides BT and FCS that supported Ofcom's *laissez-faire* and two other respondents that concur with the regulator's claim that there is not enough evidence to take a decision, all other stakeholders believe that Ofcom is not doing enough. In this respect, the same interviewee that praised Ofcom's green approach also added:

I think that in terms of Ofcom's approach, in hindsight, they should probably on the one hand congratulate themselves that they did not weigh in too heavily in response to BT's embryonic

21CN programme because the plans ended up being dramatically scaled down. Whether they would ever acknowledge that they might be setting the incentives inappropriately for BT as well is another question entirely (Interview 4, industry, January 2011).

In particular, given that interconnection disputes will be on the table for the next few years and current *fora* for commercial negotiation do not seem to work, several respondents found Ofcom's inaction unjustified.

Under those circumstances, was *laissez-faire* still the most desirable approach, thus signaling an instrumental use of knowledge? Or is inaction driven by the fact that (political and commercial) priorities lie elsewhere, for example in superfast broadband? In that case, Ofcom's 2009 Consultation and the 2010 Statement could essentially be a means to keep track of market developments and respond to mounting discontent, even though the agency has no real intention to act on the situation. If that were the case, would this be enough to conclude that we are witnessing a symbolic use of knowledge? Finally, what if Ofcom had enough evidence to act at least on some of the most pressing issues (such as interconnection), but decided to do nothing for a series of reason? Would this be a case of non-use of knowledge?

In fact, when one looks at the objects of conflict in 2009 and 2010 and at the level of problem tractability, it is clear that under the new circumstances, any decision in the NGN case would require Ofcom to take a stance, and ultimately facilitate or delay the deployment of NGNs on a broader scale. Specifically, if Ofcom were to decide that IP is a proven technology, then interconnection costs would fall on BT and other legacy operators, making the usage of old networks less profitable and less desirable. Conversely, keeping current charging schemes leaves the burden of interconnection between old and new networks on those who have deployed NGNs. According to Ofcom's analysis, this solution works, as new entrants like Talk Talk and Sky are profitable and keep investing despite the fact that current interconnection arrangements do not favour them.

Does this mean that Ofcom simply does not want to alter existing *equilibria* because the best solution is letting the market decide who is going to get the biggest slice of the profits' pie? Or could this indicate that Ofcom believes that the "brave new world" envisaged in 2005 may not be the safest bet for the coming years, as NGNs are a more promising priority (thus implicitly, choosing sides)? Both ways and in contrast to the situation in 2005 when games were still open,

any move by Ofcom in 2010 would have affected the direction of market developments. So what should have been the role of the regulator under those circumstances?

This state of affairs locates this episode on a different level when compared to other case studies that were performed to appraise the proposed typology (Schrefler, forthcoming). In those episodes, conflict and tractability revolved around the best way to achieve a policy objective that was generally agreed upon, placing those cases in the realm of the “technocratic modes of settlements” described by Boswell (2009). No debate on values or high level policy goals was at stake, if not for rhetorical purposes. Here instead, in spite of the apparent disagreement on the technical issue of interconnection, we are facing a much deeper question: what is the role of the regulator? Should it be a facilitator for a smooth functioning of the market, leaving it free to follow its course, or should it point market players in the right direction? And would this second approach still fall within Ofcom’s remit? Or would it go beyond the agency’s duties? And more importantly for this paper: how is knowledge used in those cases?

The few portions of coded text that include an explicit reference to Ofcom’s use of knowledge in the 2010 Statement, point to either an absence of real substance in Ofcom’s analysis or to the use of erroneous premises. This is not only the position of those who believe that by stating that IP technology for voice is unproven, Ofcom’s paves the way for its decision to do nothing on interconnection. One of the supporters of some of Ofcom’s conclusions (BBBritain) considers that the whole analysis is based on conservative premises, which allow Ofcom to ignore relevant evidence. Another consultation respondent believes Ofcom’s analysis does not show enough independence of mind, as the regulator’s stance seems to follow prevalent commercial interests. Talk Talk’s consultation response claims that Ofcom is beating around the bush by addressing “blue sky questions” instead of the pressing concerns that are under everybody’s eyes. For some, the salience of superfast broadband deployment seems to have been a key driver behind Ofcom’s decision not to act and, by the same token, affected the use of knowledge in connection to NGNs. Yet, saliency cannot be the only factor behind the decision,²⁸ although it may have been a convenient element to postpone answering intractable questions. In fact, Ofcom is portrayed as rather passive or “stuck” on NGNs in a more general way:

²⁸ After all, Ofcom had already invested in this dossier, and actively engaged other bodies such as NGNUk in the debate. Companies had also undertaken significant efforts on NGNs. Hence, all actors incurred a series of transaction specific investments (Williamson 1979) that could not easily be recouped.

Economic analysis is never conclusive in the sense that it points to one single answer. I am not suggesting for a minute that Ofcom's policy is challengeable in the legal sense or that they have done a flawed job; it's more a policy which is...they have taken one approach which from our perspective is wrong but for many other operators it's the correct one, particularly from BT's perspective. It's just a matter of political or, if you like, the willingness of Ofcom to drive the change...Ofcom's policy work on NGNs is probably one of the largest failures of the regulator over the last five years, and it's very difficult to see what Ofcom has brought to the table if you like (Interview 2, industry, January 2011).

I think you'll be familiar with the term "laissez-faire" (laughs). So I think that summarizes Ofcom's attitude, they would say "we would like industry to sort things out", but they don't lead it. They leave things to the market players, and of course those with the greatest market power can get things done... So they expect all this to happen but they don't say how, and they do not recognise that actually it's not in some players' interest for it to be easy for customers to migrate.... I can't think of anything where they should have done less. Where they could have done more I think is the sort of thing we put in our response, it's about co-regulatory arrangements. They do have power and duties, I think under the UK legislation, to encourage and promote what's called self-regulation under the Act... (Interview 3, industry, January 2011).

The disappointment of several stakeholders and the contradictory positions expressed on what Ofcom should do (as mentioned, BT and two others support the regulator's stance) bring to the fore the ambiguity of the regulator's position in groundbreaking cases. There is no perfect solution to the technical problem of interconnection facing Ofcom, but this is because the answer to this question is linked to the decision on whether to push NGNs or not. Expert knowledge may not be sufficient to solve this dilemma, as when regulation is at stake, expertise should ultimately answer questions that are set in legal terms.²⁹ And Ofcom's mandate does not provide a clear direction for action in such cases.

As reported by several interviewees in Schrefler (forthcoming), the Communications Act establishing Ofcom's duties remains vague in many respects, and despite its costs and disadvantages, judicial review has served as a means to provide direction to Ofcom. In fact, judicial review has helped Ofcom learn where boundaries lie on several issues. In the present case too, stakeholders expect a series of disputes on interconnection as a means to unblock the situation. This may provide additional clarity on whether Ofcom should be more or less interventionists in situations like the NGN case, or perhaps this is the sort of answer that can only come from a political principal, thus opening a different debate, namely the one on the agency's independence.

Seen in this light, Ofcom's inaction appears as a sort of temporary Pareto-efficient solution, as no amount of evidence would manage to answer the real question facing the regulator:

²⁹ Wouter Werner, presentation on experts in policy-making, Rotterdam 24-25 June, 2011.

In relation to their NGN policy Ofcom probably thinks: “What’s the big deal, there is no huge problem, people aren’t losing money, people aren’t being damaged”... But it sort of does imply that we are to some extent ignoring what’s right from an economic policy perspective in order to concentrate elsewhere, and they are fearful...that disrupting the legacy operators...(Interview 4, industry, January 2011).³⁰

Also, expertise becomes irrelevant when there is no regulatory decision, as when no specific course of action is proposed, there is less need to justify/support it with evidence.³¹ As a result, real content can be absent or ignored (if present) but expertise as a general concept can still play a symbolic and legitimizing function (Boswell 2009) to show that the regulator is working on the policy question under examination.

The convergence of narratives on the unfolding of events between BT’s announcement on the 21CN project in 2004 and the moment when the company decided to allocate its resources to broadband deployment indicates that our hypothesis on instrumental learning (H4) is corroborated under the conditions of low problem tractability and limited conflict. The intention to learn in the NGN case is apparent also in Ofcom’s official documents. However, this - alone - is not a strong enough indicator, given that official texts conform to a certain narrative and it is unlikely that they would report any use of knowledge departing from learning or problem-solving. Moreover, official narratives do not fully account for the second part of the NGN debate.

In the second part of the NGN story, the first discrepancies between Ofcom’s and stakeholders’ narratives start to emerge. There is no doubt concerning the fact that no decision was reached in the NGN case. Nonetheless, the justification for this state of things differs, depending on who is describing the episode. For Ofcom there was no right answer to the intractable issue of interconnection, as any choice would have implied steering the market, and current evidence does not provide any uncontested direction on this point. Also, the market and policy-makers have exhibited stronger preferences for focusing on NGNs, thus relieving the regulator from the pressure of solving the NGNs dilemma in the immediate future. Conversely, for several

³⁰ In this respect, an additional element may be added to this picture, although it was only hinted to by one or two interviewees. Leaving things as they were would have also avoided a disruption in the business models and employment choices of several legacy operators. While the innovation potential of NGNs is ultimately expected to bring growth and jobs, as mentioned, these gains do not immediately materialize while costs, also in terms of employment, could be visible immediately. It is quite possible that the regulator considered those aspects too, especially after the financial and economic crises of 2008-2009.

³¹ On this point, one interviewee commented: *‘[the Statement] doesn’t appear to be strongly based on economics, they maybe get some consultants to give some views, but they are just reacting to market development. And in a way, if they are not making many decisions, they don’t have to have many bodies of evidence to defend them, perhaps...’* (Interview 3, industry, January 2011).

stakeholders Ofcom is failing its duties by not taking a stronger role in leading the debate. While many recognize that Ofcom's position is not an easy one, and that indeed any of the potential answers would be right for one side of the debate but wrong for the other, many believe that Ofcom could have provided additional steering without going as far as micromanaging the market.

Where does that leave us in terms of knowledge utilization in the second part of this episode? Overall, it seems that with the growing conflict on interconnection arrangements and low tractability, knowledge does not really have a role. The analysis provided in this paper allows us to exclude a symbolic use of knowledge where the agency produces expertise that has no real relevance for the decision at hand. We are thus faced with three alternatives: a symbolic use where the agency tries to buy some additional time and show it is working on the dossier, a case of non-use, or again instrumental learning where the agency is still in the process of gathering additional evidence.

To conclude that we are facing a case of non-use implies believing that Ofcom had enough knowledge to proceed but decided to ignore it. There is no firm indication of that, as even if Ofcom had framed the analysis and assumptions differently, there would still have been the issue of deciding what the right solution for the future direction of market development was. And available knowledge could not answer that question. Possibly, the most accurate scenario is that there was indeed insufficient evidence to take a decision that would not be challengeable in court, and this situation, coupled with the financial crisis and the high saliency of broadband deployment, created a perfect scenario for postponing action while showing that NGNs were still on Ofcom's radar. In other words, this episode appears as a mixture of instrumental learning and symbolic use of expertise.

But this is only one part of the story. As mentioned, NGNs are one of those cases where deeper questions are at stake, in particular issues concerning the role of the regulator. We are exiting the territory of "technocratic modes of settlement" (Boswell 2009) and entering debates on high level policy outcomes. This is an area where expertise does not always have definite answers. And in a regulatory setting, expert knowledge can only answer deeper question when these are already phrased in legal terms, either in the mandate of the agency or through judicial review. Alternatively, the direction of travel has to be set within a higher policy framework, often at the political level.

8 Concluding remarks

This paper was meant as a contribution to the debate on the role of expert knowledge in policy-making, a question which is particularly relevant in the case of appointed bodies such as independent regulatory agencies. At the same time, it also sheds light on the functioning of IRAs once delegation has occurred, and can be linked to broader research questions such as the independence of appointed bodies from their political principals, problems of transparency and accountability, and the equilibrium between technical and political inputs in policy-making. As explained in Section 2, the issue of knowledge utilization is not limited to a straightforward dichotomy between using and not using expertise. To the contrary, as already discussed by Boswell in a different context (2006, 2009), the use of knowledge can be articulated in four different modalities, each driven by different motivations and possibly explained by different conditions.

Without entering normative debates on the scientification of politics and the politicization of knowledge and their appropriateness, the NGN case described here clearly shows some of the inherent difficulties of delegating powers to an independent regulator, an issue often discussed in the literature on agency independence. More importantly for our research question, it is also closely linked to the issue of how a regulator copes under those circumstances. Here, Brunsson's distinction (1989) between action and political organisations can explain the regulator's choice of a temporary "Pareto-type" arrangement based on inaction, on the grounds that no operator would have been damaged in the short term. Given the situation in the market at the time of the 2010 Statement, there was perhaps no other sensible alternative.

This episode also shows how normative assumptions on the expertise-based legitimacy of agencies are misleading, as organisations can, need, and do use knowledge in ways that are not only instrumental, as already shown by Boswell (2009). Whether this is right or wrong may sometimes be decided by looking at the question from a legal perspective (i.e., the mandate of the agency, a strategic uses of knowledge overturned by judicial review) but different knowledge usages remain nonetheless a fact of life.

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