Comment

BRIDGING THE GAP BETWEEN SCIENCE AND POLICY:
THE IMPORTANCE OF MUTUAL RESPECT, TRUST AND THE ROLE OF MEDIATORS

Science communication between researchers and policy makers. Reflections from a European project

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ABSTRACT: *The SCOOP project aimed to maximise the potential for the transfer of research findings into policy using European-funded socio-economic sciences and humanities research. The project incorporated a News Alert Service to communicate policy-relevant elements of research findings to interested stakeholders. It also sought to further develop the skills of researchers to effectively communicate research outcomes to policy makers through a programme of Masterclasses. A series of evaluation surveys were held to both tailor the project outputs to the target audiences, and to measure the impact of project actions on the interactions between SSH researchers and policy makers. Both SCOOP elements were well received, with evidence of improved communication, utilisation of SSH research by policy makers, and greater awareness and proactivity on the part of the researchers. More generally, interviews and questionnaire findings demonstrated that mediators play a crucial role: various intermediaries and interpreters work between policy makers and researchers to put in context the research outcomes and convey information through dedicated channels and formalised processes as well as informal, fluid processes.*

Context

Science governance (with the involvement of all European citizens) and evidence-based policy making are among the main pillars of the Lisbon Strategy and now of the new Horizon 2020 growth strategy of the European Union.[1,2,3] Both processes require substantial transformations in European society, not least the necessity to overcome the historical scarcity of communication between researchers and other components of European society.

  In recent years the European Commission has focused efforts to promote and support the sharing of scientific knowledge not only within the scientific community (to create the so-called European Research Area), but also between scientists, policy makers, stakeholders and society at large.

  One such effort was the SCOOP project (2009-2012), funded by the European Commission under the Socio-economic Sciences and Humanities 7th Framework Programme for Research. Albeit limited in scope, SCOOP was designed to contribute to and support the communication of research findings to policy audiences. This article presents SCOOP as a test case for innovative communication models between such audiences, providing food for thought for future actions in this area.

  The Socio-economic Sciences: Communicating Outcomes Oriented to Policy (SCOOP) project aimed to maximise the potential for dissemination and knowledge transfer of socio-economic sciences and humanities (SSH) research. The project provided a tool to improve the uptake of SSH research into policy at the local, regional, national and European levels. It also sought to further develop the skills of SSH researchers to effectively communicate research outcomes for the benefit of European society.

  The project directly disseminated the results of research funded under the 6th and 7th Framework Programmes (FP6 and FP7) to policy makers, policy administrators and other stakeholders via a 'monthly' News Alert Service. There was also a more indirect communication focus, related to building the capacity for effective communication of research amongst coordinators of FP6 and FP7 funded projects. This strand of the SCOOP project, which involved science communication 'Masterclasses'

(training courses), was designed to achieve long term impacts (beyond the life of the project) on the SSH research community, by providing face-to-face training in communication techniques, and specifically on how to write for and engage with policy makers.

Across the SCOOP programme a series of evaluation surveys accompanied all project elements, to help tailor the News Alert Service and the Masterclasses to the target audiences, and to measure the impact of these actions on the subsequent interactions between SSH researchers and policy makers. Details of these evaluation processes are outlined in Figure 1. Overall, researchers who responded to the various data collection processes represent a significant sample of the European SSH research community. This includes researchers whose work was featured in the News Alert Service, researchers who responded as readers of the News Alerts and those who attended the SCOOP Masterclasses (approximately 300 researchers representing all European countries). Additionally, approximately 300 policy makers working at the European or national level from more than 20 European countries participated in the project's evaluation actions.
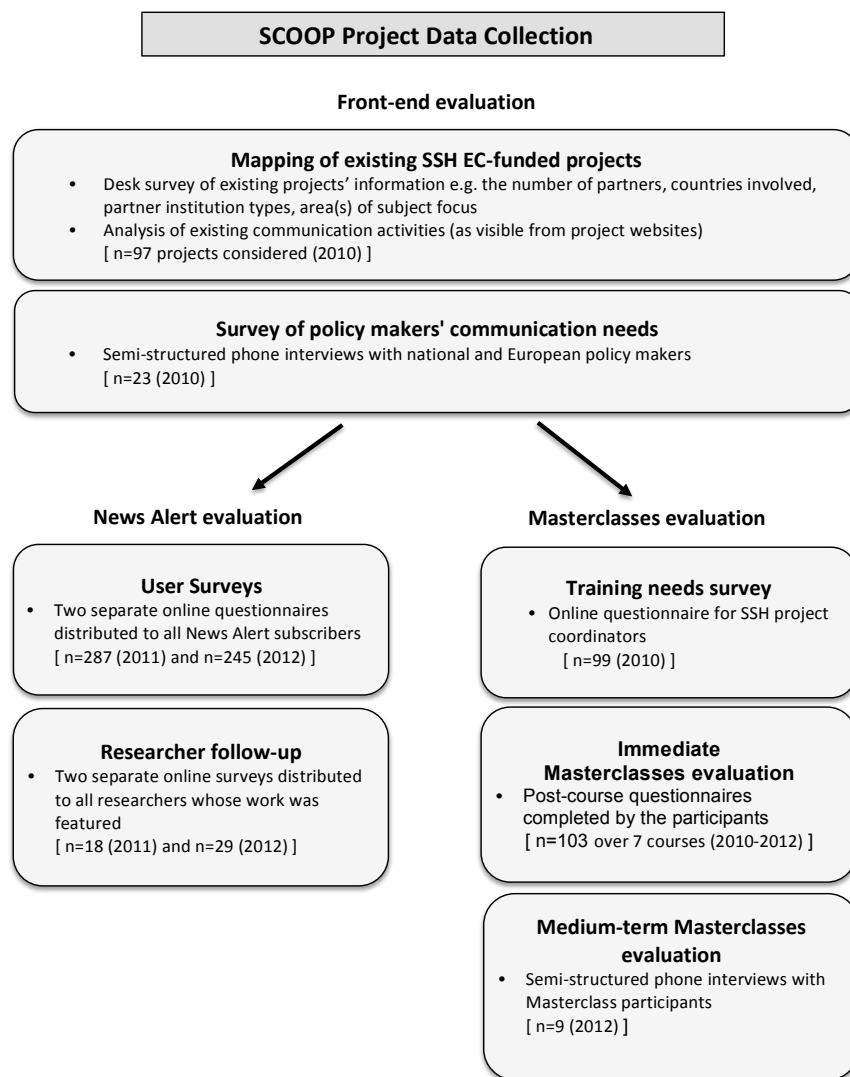
Figure 1. Scoop evaluation scheme.

The data collected not only provides evaluative feedback on the SCOOP project; the interviews and questionnaires also aimed to better understand the communication flow between researchers and policy

makers more generally. In the context of this commentary, we therefore present findings that help to explore the relationship between policy makers and researchers, as well as more specific results from the project evaluation to highlight strengths and weaknesses of possible solutions towards enhancing policy maker-researcher relationships.

Policy makers' information sources

Across our data it is clear that European policy makers obtain their information on SSH research via multiple sources. The internet is at the top of the list of most frequently used sources, followed closely by newsletters, conferences and congresses, general media and intermediaries (e.g. colleagues, consultants internal or external to the institution, committees, partner institutions, etc.); these are all communication channels that half or more of our respondents declared they use 'often' or 'very often'. Grey literature, Think Tanks and academic journals are also recognised sources, but direct contact with researchers and social networks are less frequently used.

Despite multiple types of information sources, the majority of researchers and policy makers contacted consider the channels of communication between researchers and policy makers to be poor, confirming previous research in this area.[4] Qualitative interviews confirmed the existence of three main barriers to more effective communication: contextual (e.g. lack of opportunities, differences in timescale and different perceptions of relevance), structural (e.g. working methods and agendas, volume of information and access to research) and personal (e.g. trust in sources, personal contacts).

Moreover, researchers and policy makers within our sample also identified a problem with the 'abundance' of information, for example via the internet, noting that this can lead to difficulties in identifying which sources should be valued. Some of the policy makers we interviewed affirmed that in fact, it is not so much a lack of good channels that makes the communication between researchers and policy makers difficult, but rather the superabundance of information, within which it can be difficult for policy makers to orientate themselves. The interviewees mentioned a feeling of "confusion", "too much information", "too many channels" and that it is too "difficult to select" relevant information. The majority of respondents to the 2012 News Alert Service User Survey (53.2%) confirmed this issue, agreeing with the statement that "the abundance of information available makes it difficult for policy makers to find relevant research".

The role of mediators in receiving and assessing information

Given the reported difficulties experienced by policy makers in identifying and judging the value of research outcomes, an obvious solution is some form of facilitation between the scientific and policy communities, where scientific materials can be reviewed and interpreted for policy purposes. In this respect, the role of the 'mediator', working between the policy maker and researcher, is a valuable one as s/he can help to find, interpret, explain and value the research results. In the words of one of the policy makers interviewed:

> *"Too much information that creates confusion is a problem we have in many areas and, therefore, in that of research too … in fact, scientific results must be explained, they must be made palatable and often they are not palatable, you need an intermediary who makes them such."*

For our respondents the problem is not only the abundance of information, but also how it is communicated; they indicate that the flow of information between researchers and policy makers benefits from a skilled third party involved within the communication processes, to ensure that the message gets across. It is also interesting that they consider that it is important that such messages are made 'palatable', i.e. that the information alone won't engender interest in the research. The mediator role is therefore apparently twofold: to 'interpret' the scientific content and also ensure it is appealing to the recipient. This is not to say that our respondents saw the mediation process as equivalent to public relations (PR); as we will describe later in this section, the 'palatability' issue was more around making the content *relevant* to the policy recipients.

Some of the mediators are institutional: committees, consultants, colleagues, etc. According to the MASIS report,[5] the European situation in this respect is not homogeneous, with some countries having more formalised procedures for incorporating science-based knowledge and scientific advice in policy making, whilst others are currently in the process of formalisation, and others still have no such procedures established or planned.

Our sample is not numerically sufficient to register with certainty country-related peculiarities, nevertheless we received some hints of particular differences during the direct interviews with policy makers. Those decision makers working at lower levels of governance, and /or in countries with less structured processes for policy making, do not have dedicated information services and cannot rely on institutional intermediaries; as a result, they report facing more problems in accessing and interpreting research information. For those policy makers informal, not institutional, mediators with a broad audience base are very important, such as journalists and science communicators. Grey literature, newsletters and also internet websites and other online information resources are products of practitioners who interpret, contextualise, assess and give value to research results. This need of mediation can also help explain the broad use of general media as a declared source of information on research by policy makers.

The majority of SCOOP News Alert Service users confirmed this interpretation, agreeing with the statement: "The presentation of research to non-experts makes it easy for policy makers to understand" (53.2% agree or strongly agree, and only 17.3% disagree or strongly disagree). They saw journalists and science communicators acting as 'interpreters', translating research results into more understandable language. Specific features of a good 'translation' are, in the opinion of our respondents: to be concise, precise, simple, to use graphics and to contextualise the research. But the most important function was to clearly express the 'so-what?', i.e. to highlight the relevance of the research to society. This was explicitly stated by a policy maker working as an advisor at the European level when discussing with the interviewer the communication barriers between policy makers and researchers:

"Jargon certainly, but also the fact that often the results are presented as important to the field, but it is not explained why they are so important to the field and sometimes I have a tendency to then think: OK, so what? They *[scientists]* think their report is important but is seems that only people who are already working in the field can appreciate the importance of the findings, but if you are not in the field it is difficult to really make an opinion on whether this is something important or not."

This problem of clarifying the context of the research findings again leads us back to the need for some form of mediation. Our respondents argued that scientists are not always best placed to identify and/or describe the bigger picture, and therefore third-party intermediaries were again identified as being crucial. In particular, respondents to our surveys think that research findings are often not presented in a way that would make them directly useful, they are 'decontextualised' and /or lack the presentation of scenarios that include facts and figures directly relevant to policy makers.

Incorporating research into policy

Interviewees and respondents contacted during the SCOOP evaluation actions reported that there is a growing awareness of the relevance of research for policy making. The majority of the respondents to the 2012 News Alert Service evaluation agreed that "there has been a recent trend toward evidence-based policy making" (62.6%), and more than two thirds (73.4%) believe that policy makers need scientific evidence that supports existing/future policy. There is also positive (albeit self-reported) evidence of direct research-policy links: of the 93 respondents in the 2012 User survey who claimed to be directly involved in policy making, 65.8% indicated that they refer to research findings "Very often" or "Often". The majority of respondents (63.8%) also think that research is generally policy relevant.

Nevertheless, there are still improvements to be made: in the words of one respondent, "Evidence-based policy making is still in its 'childhood'". Approximately half of the sample claims that policy makers find practical experiences more useful than scientific evidence (49.3%), and affirm that policy makers take into account general scientific knowledge but rarely focus on specific research results (57.2%). There are also other priorities recognised as being more important: over two thirds of the New Alert Service users (both researchers and policy makers, 69.9%) think that "Political party agendas are major driving forces in policy making", but only one third of respondents (36.2%) think that "Scientific evidence is a major thrust in policy making".

Considering the policy-relevance of research itself, New Alert Service users noted that research programmes are rarely designed specifically to address policy makers' needs. A consistent number of respondents (nearly half, 43.6%) affirmed that researchers do not have sufficient skills in communicating their research effectively (30.1% neither agreed nor disagreed, and only 26.3% believed that researchers are sufficiently skilled in this area). Some interviewees were also critical of researchers' attitudes towards communication more broadly:

"The research community in general thinks that by publishing their results, for example in the academic journals, they somehow magically become known to general public as well, which is of course not a fact".

Although somewhat disparaging in the language they've chosen here, this respondent raises an important issue: it's not just about having the 'skills' to communicate effectively outside the scientific community, but also having the motivations and incentives to do so. What was not clear within this work was whether policy makers saw such researchers as deliberately *choosing* not to communicate their work via other means. Certainly within the Masterclass discussions it was obvious that lack of awareness, rather than deliberate obstructiveness, was the main problem. Broader communication responsibilities were generally a new concept for many SSH researchers, but one that they were willing to take on (preferably with guidance and assistance) if it was perceived as a requirement of their EU funding.

The SCOOP project deliberately aimed to overcome the two issues identified above: providing both a mediation service as well as raising awareness (on the part of the research community at least) of how to communicate more effectively with policy makers. On the one hand, the News Alert Service attempted to provide the concise, relevant information policy makers require, whilst on the other the communication Masterclasses directly empowered the researchers, enabling them to undertake more effective dissemination of their research findings. Brief summaries of the main findings for each of these components are provided here to demonstrate particular strengths and weaknesses of this attempt to overcome the issues identified.

The SCOOP News Alert Service

The SCOOP project developed a distinctive email news alert format, comprising short flash news summaries followed by policy-relevant news articles, written by professional science communicators and journalists. The 5-6 news articles were distributed monthly to subscribers via an HTML email containing. The email also provided a clickable link to a printable PDF of the entire news alert content stored on the project website (http://www.scoopproject.org.uk). There are currently approximately 8,800 subscribers. As at December 2011, 37% belonged to international organisations (e.g. NGOs, Think Tanks, trade unions), 34% were from EU institutions, 26% from national and regional authorities (including research institutes) and 3% were categorised as 'other' (e.g. business or media).

Findings from the News Alert Service User surveys demonstrated that subscribers valued both the service as a whole as well as the quality of the individual articles. The large majority of respondents (67.1% in the 2012 User survey) made extensive use of the service, reading at least one full article in each News Alert received. When the respondents' backgrounds are taken into account this percentage is slightly higher for those who indicated that they are directly involved in policy making (68.3%). The large majority of respondents (62.9%) indicated that they read the News Alert to find out about current research in Socio-economic sciences and humanities research, and a large group of those directly involved in policy making affirmed that they found the service useful for policy making purposes (39.4%).[6] These findings suggest that the service provided relevant and valued information for its main target audience.

The 'mediation' role undertaken by the News Alert Service did not however generally lead to increased direct contact between researchers and policy makers: News Alert Service readers contacted project coordinators whose research was featured in an article in only a few cases. However, the evaluation showed that the News Alert Service did facilitate wider communication efforts by the researchers, both within their institutions and externally, for example by adding a link to the article on personal and institutional websites, including the text from the article and/or the reference in reports, embedding the text in their project newsletter, etc. Thus there was some evidence that the News Alert Service was able to produce a snowball effect: the article was not just read, but used 'creatively' by research authors for other dissemination purposes, and ended up appearing in other contexts (websites, newsletters, etc.). Researchers also considered the articles to be good models of how research should be communicated,

and emphasised the value they placed on the articles by making explicit reference to them when working on dissemination actions.

There were however some limitations identified. Response rates to the News Alert Service User surveys were disappointing, despite repeated reminders and directly emailing recipients (in the 2012 User survey, 245 people completed questionnaires out of a total of 8742 possible respondents). Whether this reflects a more general unwillingness to participate in surveys on the part of policy makers or was in some way specific to the project is unclear. It does, however, raise the question of whether the respondents are fully representative of the SSH policy community. It seems likely that those choosing to respond to the survey are more likely to be enthusiastic about the service and possibly more interested in incorporating research into their working practices than non-responders. Thus, the results presented here may reflect the views of a subgroup of policy makers who are particularly interested in research findings. As such, it would be appropriate to undertake a similar survey of policy makers recruited via another means to check whether similar responses are received.

SCOOP Masterclasses: Empowering researchers

The programme of communication Masterclasses consisted of seven courses over 2010-2012, each 1.5 days long. The programme schedule was deliberately intended to enable participants to travel to Brussels on the morning of the first day, and return home again after the course on the second day, thereby reducing participants' time out of the office (and associated travel and accommodation costs). A Brussels location was chosen, both because it meant that key European Commission staff were able to contribute to specific sessions and to enable participants to arrange meetings with their project officers, thereby adding further value to the trip. The courses were designed for the coordinators of SSH EU-funded projects, focusing on skills and knowledge directly applicable to researchers. In particular, the participants explored how to write policy briefs, press releases and other dissemination materials. They also discussed more generally how to identify (and approach) relevant policy makers, as well as appropriate guidelines for web design and planning a communication strategy. The delivery team consisted of an experienced journalist and science communicator, providing an interactive, practical approach without excluding the discussion of more general and/or theoretical issues. A practical guide for communicating research for evidence-based policy making, produced and distributed by the European Commission, was also provided to attendees.[7]

The immediate evaluation feedback after the courses was very enthusiastic: participants found the courses interesting, relevant and enjoyable. Of particular value were the 'real examples' of existing communication mechanisms that were used within the workshop sessions, as well as the opportunity for participants to receive direct feedback on their own approaches. Participants especially valued the presence of staff from the European Commission during specific sessions, as well as the opportunity to clarify and confirm the Commission's expectations with regards to communication outputs.

In addition to the immediate post-course evaluation, nine in-depth interviews were held with participants, in order to understand to what extent the learning was put into practice in the months following the course. In the interviews participants stated that one of the most useful aspects of the Masterclasses was to have had the opportunity to learn how to write policy briefs, press releases and final reports in an effective way, incorporating elements such as format, style and content. Participants also discovered the need to tailor communication to different audiences' needs, and learned how to process scientific information in order to make it interesting and understandable to different target groups.

The evaluation showed that there was good evidence of such communication skills being subsequently embedded within the research projects, for example to improve their project websites (3 out of 9), to write policy-briefs (4 out of 9), to organise a final stakeholders' workshop (1) and to produce leaflets and organise meetings (1). Self-confidence, motivation and managerial skills were also mentioned as overall benefits of attending the courses.

The relevance and perceived value of the course was underlined by interviewees' consistent recommendation that similar training courses should be compulsory for the coordinators of all EU-funded projects (an opinion also shared by the people answering the single course questionnaires, who often added this remark as a free comment). The courses were therefore seen as a key support in overcoming researchers' general lack of awareness and skills in communicating their research to the

policy community, and provided them with guidance about effective communication procedures, formats and strategies.

Concluding remarks

Both policy makers and researchers have identified a variety of potential solutions to ensure effective communication between the two parties. The role of intermediaries is seen as crucial to ensuring that research is placed in a context relevant to policy makers, whilst both sides also acknowledge the need for further effort and prioritisation of such communication processes within their normal working practices. It is also clear that providing researchers with communications training is essential if they are to engage more effectively with non-academic audiences, whether those are policy audiences or wider communication of research findings to interested groups.

The SCOOP project actions, the News Alert Service and the Masterclasses, provide a case study example of some successes in this area, illustrating one approach to meeting the needs of both researchers and policy makers. Interpretive tools such as those provided by the SCOOP project can go some way to facilitating the effective communication of research findings to wider non-academic communities. However, for this research to be contextualised, it does need to have some policy-relevance and it is clear that for a number of research projects, the aims of the research are not clearly policy-relevant.

At the same time, it is clear that researchers value opportunities to build their communication skills as the evaluation of the SCOOP Masterclasses showed. This training empowered researchers both to create effective dissemination materials, and to more generally understand the needs of the different audiences, so as to be able to better plan the communication of their research for themselves. Further research is necessary to explore whether this will have a longer term impact, not only on how these researchers communicate their research findings to wider public audiences, but also on whether there are any lasting changes to the research process more generally. For example, it would be of interest to explore how the researchers subsequently propose and frame their research questions; do they now consider aspects that might have policy relevance, or work in conjunction with policy makers to increase the potential policy impact of their findings?

Within the SCOOP project science communicators played a crucial role. As authors of the news articles they highlighted the policy implications of contemporary research, explaining these in an accessible, inclusive language. As Masterclass trainers they provided guidance and tutorship for researchers, and were able to assist the participants to value and recognise the wider context of their work. More generally the role of science communicators emerges as an important, if not crucial, factor in the relationship between researchers and policy makers. It is clear from the evaluation that journalists working in general media, whether intentionally or not, make research more accessible to policy makers and other stakeholders. Despite the generalised opinion that the media do not always provide balanced and impartial information (see for example: Nelkin[8]), they are still among the most important sources of information not only for the wider society but also for specialised groups such as policy makers for the simple reason that they interpret and contextualise the research making it relevant to their readers (see for example Weitkamp[9]). It is well known that general media still have a crucial role in the arena of political agenda setting; less recognised, but not irrelevant, seems to be their role in providing interpretation of scientific results, making them palatable to policy makers and other stakeholders.

Besides journalists, other actors also emerge as playing an important role in making scientific information accessible to policy makers. Different kinds of intermediaries (such as advisors and committees) not only materially provide information, but also help policy makers to understand the context, the relevance, and the value of research. Whilst many such situations involving the communication of research results (and the discussion of their possible impacts on policy making) are organised in formal structures, there are many others in which this process is more fluid. Such informal frameworks enable not only the passage of information but also its interpretation, with the involvement of many channels and many actors. In this landscape any researchers who are not involved in the discussion of policies as advisors or in committees and Think Tanks, end up being at the very margins of the action, with their research findings having little impact in the decision-making processes.

Empowering scientists to communicate their research to policy makers more effectively is unlikely to reduce the importance of the different information sources. Nor is it likely to reduce the importance and

value of facilitators, interpreters and intermediaries. Such groups will continue to play a crucial role in any future interactions, and indeed may become even more necessary, as researchers place greater priority on involving such groups within their research programmes. However, a more highly skilled research community will surely help researchers to be more proactive, finding effective ways to convey their messages to policy makers and society at large, and ensuring that their work is heard whenever relevant policy decisions are being made.

Notes and references

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[4] See European Commission (2008).

[5] European Commission (2012*), Monitoring Policy and Research Activities on Science in Society in Europe (MASIS)*, Final Synthesis report. Directorate-general for Research and Innovation, Science in Society/Capacity FP7. EUR 25251 EN.

[6] Respondents could choose up to three main reasons for reading the News Alerts from 10 possible options.

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