How far does an emphasis on stakeholder engagement and co-production in research present a threat to academic identity and autonomy? A prospective study across five European countries

Annette Boaz [1],*, Robert Borst [2],*, Maarten Kok[3] and Alison O'Shea[4]

[1]Department of Health Services Research and Policy, Faculty of Public Health and Policy 15-17 Tavistock Place, London, WC1H 9SH, UK, [2]Institute of Health Policy and Management, Erasmus University Rotterdam, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands, [3]Department of Health Sciences, Amsterdam Public Health Research Institute, Amsterdam, The Netherlands and [4]Faculty of Health, Social Care and Education, Kingston University and St George's, University of London, St George's Campus, 6th Floor Hunter Wing, Cranmer Terrace, London SW17 0RE, UK

*Corresponding author. Email: annette.boaz@lshtm.ac.uk (A.B.)

Abstract

There is a growing recognition that needs more to be done to ensure that research contributes to better health services and patient outcomes. Stakeholder engagement in research, including co-production, has been identified as a promising mechanism for improving the value, relevance and utilization of research. This article presents findings from a prospective study which explored the impact of stakeholder engagement in a 3-year European tobacco control research project. That research project aimed to engage stakeholders in the development, testing and dissemination of a return-on-investment tool across five EU countries (the Netherlands, Spain, Hungary, Germany and the UK). The prospective study comprised interviews, observations and document review. The analysis focused on the extent to which the project team recognized, conceptualized and operationalized stakeholder engagement over the course of the research project. Stakeholder engagement in the European research project was conceptualized as a key feature of pre-designated spaces within their work programme. Over the course of the project, however, the tool development work and stakeholder engagement activities decoupled. While the modelling and tool development became more secluded, stakeholder engagement activities subtly transformed from co-production, to consultation, to something more recognizable as research participation. The contribution of this article is not to argue against the potential contribution of stakeholder engagement and co-production, but to show how even well-planned engagement activities can be diverted within the existing research funding and research production systems where non-research stakeholders remain at the margins and can even be seen as a threat to academic identify and autonomy.

Key words: research utilization; stakeholder engagement; co-production; smoking cessation; return on investment; public health; health services research; academic identify

1. Introduction

There is a growing recognition that needs more to be done to ensure that health research is fully mobilized to support improvements in health services and ultimately in outcomes for patients (Oliver et al. 2019). However, in seeking to understand the problem and potential solutions, much of the literature has focused on shortcomings of potential evidence users (such as health care practitioners) and their organizations (Ferlie et al. 2000; Currie and Suhomlinova 2006). This has most commonly been conceptualized as a limited absorptive capacity to use research in health care organizations (Zahra and George 2002). Less attention has been placed on the roles and behaviours of academics and their organizations in supporting or inhibiting the use of research. It might be assumed that, as knowledge producers, research organizations will play a full and active role in supporting the use of research. But, as others have shown, research organizations may have conflicting interests that can obstruct research utilization efforts (Kogan and Henkel 1983; Rip 2001).

However, there is a drive for academic researchers to build links with individuals and organizations outside of the academy. In the UK, the influential review by Sir Paul Nurse advocated a more dynamic relationship between organizations that produce and those that use healthcare research (Nurse 2015). This forms part of a wider shift towards more networked and collaborative forms of working for public sector organizations (Kislov 2018) and an appreciation of interdisciplinary and team-based science (Roelofs et al. 2019). The importance of engagement as critical to processes of change can also be seen as part of a longer tradition within social science research (Lewin 1958; Habermas 1987). This tradition has been described by Glerup and Horst (2014) as an integration rationality which conceptualizes knowledge production as a fundamentally collaborative process.

Much of this work on supporting the use of research evidence focuses on improving relationships between different actors in the evidence system (Zimmerman 2020). This is often defined as linking with those with a 'stake' in the research, or 'stakeholders' (Boaz et al. 2018). Who these stakeholders differs—ranging from patients, to policymakers, or more generally potential research users. Stakeholder engagement is considered to have a number of potential benefits including improving research questions, research tools and practices, supporting dissemination and building longer term research-practice partnerships. There is also some evidence to suggest that stakeholder engagement might be a potential mechanism for improving research impact in terms of both healthcare practices and outcomes for patients (Kok et al. 2016; Boaz et al. 2018).

The literature often refers to a spectrum of approaches to engagement, suggesting that stakeholders can be engaged in diverse ways that range from providing them with information, to consultation or co-producing research with them (Boaz and Metz 2020). The debate has shifted further, with increased emphasis on the potential contribution and challenges involved in co-producing health services research (Filipe et al. 2017). In particular, there has been a debate about what has been described as the 'dark side' of co-production (Oliver et al. 2019; Williams et al. 2020). While the terms co-creation and co-production are now widely used, it is less clear to what extent they signal a change in attitudes and practices (Locock and Boaz 2019).

There are a range of programmes in place to support stakeholder engagement in research. For example, in the USA there has been a widespread adoption of research practice partnerships (Coburn and Penuel 2016) and the development of the US Patient-Centered Outcomes Research Institute's (PCORI) database of articles on stakeholder engagement in research, while in Canada knowledge translation activities have been developed to connect researchers with policy stakeholder communities (Gagliardi et al. 2015). The drive to promote links with stakeholders is captured in most knowledge transfer models. In particular, stakeholder engagement aligns with what Best and Holmes (2010) describe as relational models of knowledge transfer. These models represent a shift from preoccupations with conventional dissemination activities, adding a focus on interactions between people using and producing research, including the development of partnerships and the establishment of networks (Best and Holmes 2010). Capturing these interactions has proved challenging for the field of research evaluation for some time (Molas-Gallart and Tang 2011).

There are few empirical studies of stakeholder engagement, particularly taking a prospective approach. In 2013, the UK Medical Research Council (MRC) funded a prospective study of stakeholder engagement in an EU-funded tobacco control research programme (EQUIPT). The EQUIPT programme was funded to adapt, scale and spread a return-on-investment tool to support decision making in tobacco control policy in five European countries. The original tool had been developed in the UK with funding from the National Institute for Clinical Excellence and significant investment from a range of specific stakeholders, including commissioners, service providers, public health directors, local authorities, Smokefree Regional Offices and academics (Pokhrel et al. 2014a). The EQUIPT programme had an explicit theory of change that underlined the importance of engaging stakeholders to develop the tool and promote its impact. The MRC study (SEE Impact) provided an opportunity for using ethnographic methods to study how stakeholders were engaged during the course of the EQUIPT research programme and to compare differences between stakeholder engagement in the different countries.

In this article, we address the following question: what can we learn from prospectively studying how academics recognize, conceptualize and operationalize stakeholder engagement over the course of a European research project?

2. Methods

This article presents findings from a prospective study which explored the impact of stakeholder engagement in a 3-year tobacco control research project. Drawing on literature from science and technology studies that explore the role of stakeholders in research (Jasanoff 2004; Callon et al. 2009) and Henkel's work on academic identity (Henkel 2005), the article focuses in particular on the extent to which the EQUIPT project team recognized, conceptualize and operationalize stakeholder engagement over the course of the study. The EQUIPT research project aimed to engage stakeholders in the development, testing and dissemination of a tobacco control return-on-investment tool across five EU countries (i.e. Netherlands, Spain, Hungary, Germany and the UK). Data collection of this study comprised interviews with the project team and stakeholders of the EQUIPT research project, observations of meetings and events involving these stakeholders and a review of documents relevant to the meetings and events. Our study design repeatedly adapted to the organization of the EQUIPT project to be able to study and reflect

on changes in the engagement plans and project activities of the EQUIPT team.

2.1 Interviews

Fifty interviews were conducted with stakeholders ($n = 45$) and with members of the project research team ($n = 5$). The stakeholder interviews comprised six in Germany, eight in Hungary, thirteen in the Netherlands, nine in Spain and nine in the UK. Interviews took place between April 2015 and September 2016. In Germany, Hungary, the Netherlands and Spain, interviews were conducted face-to-face. In the UK, eight interviews were conducted over the telephone and one was face-to-face. Interviews were digitally recorded, translated into English where relevant, and transcribed. Questions were open-ended and investigated the circumstances around stakeholders' awareness of and involvement in EQUIPT, expectations of involvement in the project, the type and level of interaction with the EQUIPT team, benefits gained through working with EQUIPT, the perceived influence of stakeholder engagement on the project, and barriers to effective engagement.

2.2 Observations

Six stakeholder events were observed comprising: four events for EQUIPT team members and key stakeholders who formed the project's Research Advisory Group and two events aimed at dissemination beyond key stakeholders. The number of stakeholders who took part in the six events ranged between 22 and 60. The initial objectives of the EQUIPT project for engaging stakeholders in events were to gain feedback on the use of the ROI tool; gain support for the validation of the ROI tool; and discuss and disseminate findings about the development of the ROI tool. Each of the six stakeholder events was observed by two or three SEE-Impact researchers. The events were held in Maastricht, Brussels (two events), Budapest, London and Zagreb. The first event in Maastricht in February 2014 was a 3-day EQUIPT project team meeting. The second event in Brussels in October 2014 was the EQUIPT project's first annual team meeting and lasted 2 days. The third event in Budapest in September 2015 was the project's second annual meeting and also lasted 2 days. The fourth event in London in March 2016 was a half day workshop for stakeholders to give feedback to the EQUIPT team on an earlier, similar UK ROI tool which had been in use in the UK for some time. The fifth event took place in Zagreb in June 2016 and was a 1-day international workshop for potential stakeholders from other European countries beyond the five sample countries with the aim of supporting validation of the ROI tool in lower-income European countries. The final 3-day event in Brussels in October 2016 presented the findings of the study. In addition, six EQUIPT team meetings were observed in order to gain insight into the team's views and attitudes towards stakeholder engagement, and to learn promptly of any amendments to plans for stakeholder engagement. EQUIPT team meetings were held monthly and took place via teleconference because of the spread of team members across the five sample countries and Croatia as co-ordinator for out of sample countries. Meetings lasted approximately 1.5 h. Detailed field notes were taken at EQUIPT programme events, usually by at least two members of the research team.

2.3 Analysis

The three interviewers involved prepared detailed summaries after each semi-structured interview. These summaries covered both the content and setting of the interviews and provided 'thick descriptions' (Geertz 1973) of how stakeholders were engaged in EQUIPT. The research team used these descriptions to arrive at a first overview of recurring or deviating themes in the data. The interview transcripts and observations were organized in NVivo (QSR International 2020) and an abductive analysis approach was used to provide the data with codes. This abductive approach combines a theory-informed approach to data analysis with empirical insights from the data (Stoopendaal and Bal 2013; Tavory and Timmermans 2014). In practice, this involved a first round of inductive coding, followed by a second round where these codes were compared to existing theory and codes were added or changed. An example is how we inductively developed our code 'stakeholder engagement'. In our data, this code increasingly reflected activities that could also be seen as data collection for academic purposes. The literature on stakeholder engagement that we used, and the earlier UK experience developing the original tool, however, mainly referred to stakeholder engagement as a way to create ownership and legitimacy. By comparing the meaning of the code in our data with how it is used in our conceptual literature, we observed a contradiction that we could further explore in our analysis.

3. Findings

The presentation of the findings of this study will start with an overview of how the EQUIPT team planned stakeholder engagement, and what their rationale for doing such engagement was. Subsequently, findings are presented sequentially focussing around the four main programme events and combining data from event observations, project documents and interviews with the project team and key stakeholders.

3.1 Stakeholder engagement planning and rationale

The aim of EQUIPT was to develop country-specific tools to support decision makers (including local policy makers and those procuring public health interventions) in accessing predictions of likely returns on investment arising from funding different tobacco control interventions (Pokhrel et al. 2014b). EQUIPT set out with a clear work plan to engage with stakeholders from the beginning and throughout the programme. A wide range of terms were used by the team to describe work with potential stakeholders' including stakeholder engagement, co-creation and co-production. The study protocol used the language of 'co-creation' to signal their intent to work closely with stakeholders on the adaption, scale and spread of the return-on-investment tool to other European countries (Pokhrel et al. 2014b). Within the study design, there were two elements with an explicit focus on stakeholder engagement: in the so-called 'working space' where the return-on-investment tool was to be developed (where a process of co-creation with stakeholders was envisaged) and in the so-called 'transfer space' where stakeholder engagement was considered to be integral to the process of disseminating the return-on-investment tool. The EQUIPT funding agreement part B document states that the following stakeholder groups would be targeted: '(1) National and European stakeholders consisting of policymakers, academics, health authorities, insurance companies, advocacy groups, ministry of finance, national committees, clinicians and health technology assessment (HTA) professionals—the outcomes of engagement with Target Group 1 will be used to obtain an optimum assessment of preconditions for usability of the final*

ROI tool (Task 4); and (2) Experts on smoking cessation and HTA—the outcomes of engagement with Target Group 2 will be used to obtain an optimum assessment of the parameters to be included in the final ROI tool, taking into account the variability of smoking cessation/prevention methods used between different countries.' (EQUIPT Description of Work Part B)

A work package, with a detailed programme of engagement activities, was dedicated to working with stakeholders. There were also stakeholder engagement activities planned within other work packages to support tool development and dissemination. In total, the proposed stakeholder engagement activity detailed in the description of work for the study consisted of: a stakeholder survey across five countries (*EQUIPT Description of Work Part A, p3 of 23, last para*), 10 consensus workshops within each country and two further consensus workshops across all countries (*EQUIPT Description of Work Part A, p4 of 23, last para.*). Piloting of the country-specific ROI tools involving all stakeholders engaged in previous activities (*EQUIPT Description of Work Part A, p7 of 23, last 3 paras*); Consultation with local researchers and policy makers in the out of sample Central and Eastern European countries regarding collection of local data. (*EQUIPT Description of Work Part A, p10 of 23, 3rd para*); a workshop of UK regional and national stakeholders (*EQUIPT Description of Work Part A, p12 of 23, 2nd para.*); an international workshop of stakeholders in non-sample Central & Eastern Europe countries, (*EQUIPT Description of Work Part A, p3 of 23, 4th para*); A project website needs-assessment conducted via an online survey organized by country leads. (*EQUIPT Description of Work Part A, p14 of 23, 1st para*); Invitations to stakeholders to attend selected project meetings as appropriate (*EQUIPT Description of Work Part A, p15 of 23, 3rd para*); Network Building by collaborating with key networks and health organizations. (*EQUIPT Description of Work Part A, p15 of 23, 4th para*).

This commitment to stakeholder engagement had roots in the prior work of a number of the co-investigators who had had a positive experience of stakeholder engagement as part of the development of a previous project. The funder of the original return on investment tool study in the UK supported a high level of stakeholder engagement in the work that it funded (Pokhrel et al. 2014a). At the final event, one of the EQUIPT team who had been engaged in the prior work in the UK and had a policy role, reflected on the potential for stakeholder engagement to build long term relationships, support and potential for use:

> *'It is about a way of working, participation and coalition building around a piece of work that creates that acceptability, that willingness to create usability that had been so important in the previous work…Those who have been engaged are much more likely to use. Jack Smith [An attendee at the final event] was one of the original stakeholders in the [UK] ROI project and is now still engaging with us from a policy level perspective'* Angela, UK regional smoking policymaker

Jack had been engaged as a policy stakeholder in the development of the previous ROI tool. His role as a stakeholder had changed over time, but his relationship with the team and his interest in and understanding of the ROI product meant that now, in a more senior and influential role, he could be a powerful ally in supporting the use of the new EQUIPT tool in UK smoking cessation policy. This understanding of the dual roles of stakeholder engagement in improving the quality of the tool and supporting potential

future use seemed to be shared throughout the team and at different levels of seniority from the outset. One of the more junior researchers articulated it as follows:

> *'The idea is that we should involve stakeholders at an early stage anyway, probably because they then feel that they can also provide input in the development of the tool and that ultimately leads to more easy behavioural change. Um and that the tool is better adapted for them.'* Peter, EQUIPT researcher

This view was echoed by more senior colleagues:

> *'So basically everything is used for, everything is, everything has the idea that, by involving stakeholders, you can make the model more tailored to their wishes and their ideas, making it better and more used, so to speak.'* Ana, Theme Lead, EQUIPT

This quotation demonstrates the different theoretical frameworks individual members of the EQUIPT team were drawing on. In this case, individual behaviour change models were dominant in the thinking about stakeholder engagement of both the individual researcher and his colleagues in the work package, several of whom were psychologists by background.

3.2 How stakeholder engagement in the project evolved

3.2.1 Maastricht—February, 2014

At the first annual project meeting, the work package leading on stakeholder engagement presented a strategy for categorizing key stakeholders into five groups. These groups were: (1) decision makers, (2) purchasers of services or pharmaceutical products, (3) professionals service deliverers, (4) evidence generators (e.g. researchers) whose work informs policy, procurement, or delivery of services and (5) advocates of health promotion. In addition, the work package presented a shared methodology for initial engagement with stakeholders through face-to-face interviews. There was a very positive reaction from across the team to work done to conceptualize stakeholders into different groups and to develop a detailed interview questionnaire to gather stakeholder views at the outset of the study. Some of the team voiced concern over whether it would be possible to engage with every stakeholder category across the different countries. They argued that some groups would be less prevalent, or generally less inclined to participate in scientific projects.

The Maastricht meeting was also intended to explain and pilot the stakeholder questionnaire among the EQUIPT team members. A junior researcher, who was hired to co-develop the questionnaire and coordinate the first work package, would later explain the objective of using the questionnaire as follows:

> *"… the purpose of the questionnaire is to improve the tool, so that we are provided with input on how we can develop the tool in such a way that it aligns as much as possible with the stakeholders. So, we look at what evidence types they are interested in, but also perhaps which usability, um, characteristics they find necessary. But I really combined this with scientific research that we find interesting, namely we have integrated that with the I-Change model… So, we have the objective for EQUIPT and an objective to conduct our own research and we integrated that in a questionnaire. Um, there is overlap, But then you can understand better why we used a questionnaire in the interview, because we, because they, because the stakeholders can score on all items of the I-Change model. So that we can do research and can look at what we can improve about the tool. So, they were not*

really real interviews, it was more really very, it were very structured interviews in which they really just had to fill out a questionnaire." Peter, EQUIPT researcher

The questionnaire itself was composed of 19 structured questions, mostly requiring Likert-type answers and including several sub-questions. The information sheet of the questionnaire explained that the interview '(...) should last approximately 40 min' and—with the respondent's verbal agreement—would be audio recorded 'to save time'. Most of the survey interviews with EQUIPT stakeholders were conducted between January and July 2014. Shortly after, the SEE-Impact team approached several of these stakeholders for a semi-structured interview on their experiences being engaged with EQUIPT. Most stakeholders explained that they could not recall the exact content of the interview, nor whether they were satisfied with it. Stakeholders like Matthew expressed some confusion about what and how they were being engaged in the EQUIPT study:

Matthew [EQUIPT stakeholder]: I believe that he had a, a, uh, list with questions that he followed quite strictly, I think. And he had, yes, he had a computer with him, on which he showed things. A laptop or something.

Interviewer: Yes, he probably showed a video?

Matthew [EQUIPT stakeholder]: Yes! Yes! And that was surrounded by some sort of standardised story, by him, and that is what he then did entirely: telling that standard story. And, and, uh, asking questions before, yes. Watching something, asking questions afterwards and then at the end there was this sort of standard question, like: do you have other comments? That is when I mentioned several things. Things that, for me I think, were most important. And I have no notion whatsoever as to what happened with those things.

At this point, the idea that stakeholders would be beginning to see themselves as partners in the research process with some ownership of the tool seems to be slipping away, as Matthew describes an experience of participating in more of a one-way data collection exercise.

3.2.2 Brussels—October 2014
By the second annual project meeting in Brussels, a number of challenges to stakeholder engagement were emerging. In particular, the time required to gather feedback directly from stakeholders was proving difficult to reconcile with the needs of the modellers (working on the new return on investment tool), the demands of the technical tool adaptation process and development process. This was further compounded by the decision by the funder to require all grant holders to adhere to their original timeline (with end dates remaining set regardless of project delays) (Boaz et al. 2018).

The need to deliver the adaptation of the tool on time led to a rethinking about the intensity and method for stakeholder engagement. After much discussion, the large number of face-to-face meetings planned with stakeholders were replaced by recorded SKYPE calls with stakeholders focused on testing the adapted tool. In addition, the planned 'consensus workshop' was reframed into a usability test of the model. Initially, the workshop aimed at arriving at consensus among stakeholders regarding the most important smoking-related diseases to include in the model. At this stage, however, the modellers seemed concerned that this step would further lag the already delayed development of the tool.

'At the end of the first project day, it seems that the modellers are constantly asked to change their variables and input data. Although they articulate their concerns quite modestly, their faces express unease. Discussion is constantly focussed on what is in or outside the model' exert from SEE-Impact researcher field notes

One of the senior researchers in the project suggested to focus on usability of the model instead. Using terms as 'back-up plans' and 'thinking out of the box', he hinted at a digital approach where stakeholders could use the model whilst researchers could gather data about the usability of the model—thus noting a shift towards a more dissemination focussed engagement strategy.

3.2.3 Budapest—September 2015
By the third annual meeting in Budapest, a further shift had occurred which seemed less driven by the technical elements of tool development and the requirements of the modellers. At this stage, the EQUIPT research team seemed to be describing a pull towards generating knowledge suitable for publication. The researchers reported on a decision to conduct a survey of stakeholders to gather feedback on the tool. This validation exercise was conducted in a more conventionally scientific format. While the researchers discussed the results in terms of their utility for tool development, they also emphasized the potential for generating academic publications based on the results. As one of the SEE-Impact research team observed in her notes:

'It is possible to see how [research with stakeholders rather than stakeholder engagement] continues to gain insights for the development of the tool. In fact it may gain more detailed feedback through the observations of individuals as they use the tool. However, is it likely to build ownership of the tool in the same way as the planned face to face stakeholder engagement exercises?' exert from SEE-Impact researcher field notes

At this point, the dual goals of stakeholder engagement in EQUIPT (improving the tool and promoting use of the tool) seemed to uncouple and shift. While the importance of stakeholder views in shaping the tool remained in the foreground, the opportunity to recast stakeholder engagement as a research activity for academic publication purposes proved attractive to some of the team members. At this stage in the process, the second goal of stakeholder engagement (to build relationships and ownership of the tool in order to promote use) was mainly supported by some of the country teams, who still felt this was crucial for the success of the tool. In particular, the Spanish and Hungarian team seemed to be more committed to a more personalized approach to stakeholder engagement, as reflected in the words of a Spanish EQUIPT researcher:

"The first sentence was: 'This questionnaire is to test the users'. Maybe if you are a stakeholder you will think: 'okay, what are they asking me, what will they ask me?'. If [the interviewers] are stating that in the very first thing in the questionnaire; it makes [the stakeholders] suspect that it will be an exam. (...) So, I told [the Dutch questionnaire developers]: keep that in mind, that the interview, it is not an exam. Don't see it like an exam. But I think the Hungarians said something related to that as well" Lucia, EQUIPT researcher

A Hungarian EQUIPT member would later explain that some country teams: '(...) may have a different perspective on [engagement] and a different information need. For them the

documentation, the screenshots, might be very useful for the research purpose.' [Vilmos, EQUIPT researcher]. When he was asked to explain how this approach would affect the overall engagement of stakeholders he said: *'If you want to distinguish yourself, and if you want to build a more personal relation to them - especially, if you want them to later use the tool - I think a personal meeting would have been a better option.'*

The shift towards a more scientific stakeholder engagement approach was not the case for all the work presented in Budapest, and the perceived needs of stakeholders were regularly mentioned by members of the team throughout the meeting. The work packages presented by non-academic collaborators continued to emphasize the importance of bringing people together: The team looking at the transferability of the tool to other European countries presented their plans for engaging with stakeholders in a face-to-face event in Zagreb to explore issues of transferability. Besides, the UK team was looking to convene a meeting of stakeholders who had used the previous ROI tool to identify learning for the implementation of the new EQUIPT tool.

3.2.4 Brussels—September 2016

The EQUIPT project was concluded with an end-of-project meeting in Brussels. The meeting covered 3 days, of which one was dedicated to discussion with the research advisory group, another day was focussed on presenting the tool to external guests, and the final day was an internal meeting for the research team. At the end of the first day, the tool itself had yet to be presented:

> *'Some researchers in the meeting seem to be rather distant from the non-academic tobacco control practice. The entire meeting and I have not seen the model itself yet, whilst all the technical aspects have been exhibited. It feels a little like selling a vehicle, but then only showing the engine bay and obfuscating the exterior.'* exert from SEE-Impact researcher field notes

The second day was opened by a former Minister of Health from Austria. Afterwards, EQUIPT team would continue to present three themes: (1) stakeholder engagement in EQUIPT, (2) EQUIPT and decision making and (3) transferability of the tool. The first theme was meant to share lessons derived from the various stakeholder engagement activities. A presentation from Ana, a senior EQUIPT researcher, emphasized that stakeholder engagement *'takes a lot of effort, especially if you have to build a model from scratch'*. They would continue to explain that the team *'also wanted to maintain [their] scientific integrity'*—which sometimes led to exclusion of stakeholders or their inputs.

During lunch, one of the observers of the SEE-Impact study asked a lead modeller whether the tool itself would be presented during the meeting. The modeller explained that such a presentation was not scheduled and that, given uncertainty over the stability of the tool, they could risk disappointing the stakeholders. He also confessed that they had not actually considered a live presentation. After a short deliberation among the EQUIPT team, they decided to showcase the tool shortly after lunch.

At the team meeting following the final stakeholder event in Brussels, members of the team reflected on the misfit between the style and content of the event (with a series of academic presentations from a podium) and what they felt on reflection the audience might have appreciated (an opportunity for stakeholders to directly engage with the new ROI tool). The team had spent sufficient time discussing the importance of stakeholder involvement throughout

the project to see that the event they had organized was more suited to an academic audience than to the assembled group of potential users of the tool. One of the team commented that *'I don't think we (the team and the audience) were speaking the same language'* she talked about the lack of a *'real connection'* with stakeholders. Comparisons were drawn with a previous stakeholder event in Zagreb (led by the Hungarian team) which had provided plenty of opportunities for interactions between the team and stakeholders and was considered by many in the team to have set a higher bar in terms of expectations of stakeholder engagement in the project. One of the co-applicants (Ana, theme lead) reflected on the potential tensions for the team between close working with stakeholders and the importance of maintaining academic integrity.

There was considerable variation within the EQUIPT team regarding the importance of stakeholder engagement. While stakeholder feedback was consistently welcomed, valued and responded to by members of the team, there was less consensus about its wider potential value in relation to use and impact. In some of the EQUIPT countries, the stakeholder engagement was directly associated with an idea to increase the tool's use. In these countries, the responsible EQUIPT team maintained friendly contact with actors that could be seen as potential users of the tool. Other countries adopted a more generic understanding of potential users, such as 'decision makers' or 'researchers'.

Some EQUIPT research team members appeared to place greater significance on stakeholder engagement than other team members. They talked about the importance of more 'hands on' and 'practical' input from stakeholders and viewed the stakeholder events as being too static and research focussed. In their language, they placed a value on fully engaging and making a 'real connection' between stakeholders and the EQUIPT team. This perspective aligned with the underpinning theory of change which outlined a more bottom-up approach to its stakeholder engagement, 'working with people who are going to be making decisions in the future (and with current stakeholders) to work together to convince politicians' [researcher observation notes].

However, for some, this may have been to do with practical issues such as awareness of time restraints around the project and the need to deliver the tool on time. Some members of the team prioritized the academic elements of the project (e.g. the completion of a PhD by a team member and academic publications), often directly at the expense of stakeholder engagement activities. Furthermore, when this tension came to a head at a meeting of the EQUIPT project team and its advisors, the promise of turning stakeholder engagement activity into research data and academic outputs gained support from the partnership as a whole. The prospective of applying for follow on EU Horizon 2020 funding potentially provided a further incentive to focus on outputs. The 'irresistible pull' of academic norms proved too strong to resist, despite a considerable interest and commitment to stakeholder engagement in the programme.

> *Interview participant: I don't know, um, the stakeholders have different ideas as well. Probably some say, then you know, then you have, then you know, more difficult, then it is more difficult to determine the direction of what you are going to investigate, I think.*
>
> *Interviewer: Yes.*
>
> *Interview participant: And maybe we think something, as a scientist, is very important and then they say that it is absolutely not important, and then if they have a very large part in the process,*

then you can no longer, then you can no longer do your own thing.' Peter, EQUIPT researcher

Here, Peter, one of EQUIPT project team reflects on some of the difficulties that stakeholders' feedback presented for the technical tool development work and, to the threat to his academic autonomy in stakeholders affecting his ability to '*determine the direction*' of his work. Ana reflected on how different stakeholder engagement would have felt with the stakeholders sitting '*at the table*' rather than completing a survey.

Interview participant: Yes, well, I mean, what happened here [in EQUIPT]: the interviewer asks the stakeholders something, the interviewers summarize that, report it to the researchers, the researchers say 'yes we do' or very often 'we do not for those and those reasons', and then after a while we start asking the stakeholders again. You know, and that was it.

Interviewer: Yes

Interview participant: Um, while I think if someone really sat at the table where those decisions are made, it might have been something else. [Ana, theme lead, EQUIPT]

4. Discussion

The collaborative work in the EQUIPT project was identified as a key feature of the study design with pre-designated co-creation spaces within the work programme—the so called 'working space' and 'transfer space.' Over the course of the study, however, the tool development work and stakeholder engagement activities decoupled and ceased to occupy a shared space. The impetus for the decoupling seemed to come simultaneously from two directions and was facilitated by the organization of the activities in different engagement and production work packages. Despite the plans for co-creation in the working space of the programme, the technical work on the modelling for the new tool increasingly took place in parallel to what, by then, was more conventional consultation. Modelling and tool development increasingly occurred in the sort of 'secluded' space described by Callon et al. (2009), where there is a technical job of work to be done and outside influence can often be characterized as uncertain, unpredictable and lacking timeliness. The real-world challenges presented by delays in commencing the study and the time required to set up face-to-face stakeholder engagement had significant implications for the modellers working to a tight timetable to develop new versions of the tool for prototype testing in the different countries.

In the course of the project, most of the planned 'co-production' activities subtly transformed to consultation, and eventually, for some of the activity, to research participation where stakeholders completed surveys generating data that was subject to detailed analysis and written up for publication in peer-reviewed journals. A first step, responding to time pressures in project delivery, involved replacing the planned face-to-face stakeholder workshops with online one-to-one consultations, where developments in technology made it possible to make both audio and visual recordings of stakeholders testing the prototype tools. While this process generated detailed data on the different elements of the prototype tool from stakeholders, it did not do so in close collaboration with the modellers.

While the project team seemed to form a successful interdisciplinary collaboration of academics (Roelofs et al. 2019), the eventual collaborative research practice did not result in similar opportunities for building engagement with and ownership of the tool amongst a wider group of stakeholders across the different countries. One of the EQUIPT studies shows that Hungarian and Spanish stakeholders 'wanted to use the tool basically as soon as possible' whereas 'Dutch and German interviewees were least interested' (Vokó et al. 2016). A previous SEE-Impact study has described how this difference relates to the more personalized approach by the Hungarian and Spanish project teams, where the notion of 'stakeholders' was commonly translated into concrete actors and positions (Borst et al. 2019).

The study also surfaced a more fundamental challenge to close working with stakeholders in knowledge production and use. Mary Henkel's work (2005) on academic identity and autonomy in changing policy environments explored how academics respond to the promise and challenges of working closely with stakeholders outside of the academy. It is also echoed in the findings of Timotijevic et al. (2013) study of stakeholder involvement in scientific decision making where they observed stakeholder engagement being used to confirm the authority of science over the facts as opposed to any evidence of a reframing of scientific practice. As Morgan et al. (2011) observe, existing university policies and practices support particular models of knowledge production. As a consequence, more applied, collaborative approaches to research can end up left to one side as the dominant model of academic knowledge production (driven by the science and not primarily concerned with applicability and use of research findings) asserts its authority.

The value of stakeholder engagement was articulated clearly and consistently by the EQUIPT project team throughout. This reflects what Goffman (1963) would characterize as a shared performance front of stage. Furthermore, the substantive content of the work aligned with their values in terms of promoting the importance of supporting a more evidence-based approach to making return on investment decisions in tobacco control. Several members of the EQUIPT team highlighted their prior positive experience of stakeholder engagement in developing the UK ROI tool. Where this commitment started to unravel was 'backstage' where the more intensive engagement and co-production elements started to 'rub up against' the priorities and ways of working of academia. Kislov et al. (2017) and Lozeau et al. (2002) note the impact of similar 'compatibility gaps' between new practices and the cultural, structural and political characteristics of the system in their studies of service improvement.

While participants in the study had fully internalized the importance of academic writing and grant writing as an integral part of their role, stakeholder engagement, and in particular the planned co-production activities remained vulnerable to internal and external pressures. While there were many differences within the team, there was concordance on the importance of publications. Despite the substantial stakeholder engagement built into the study throughout, the importance of academic publications 'trumped' stakeholder engagement at every turn. There was an exuberant moment when the team as a whole saw the opportunity to publish the outcomes of their stakeholder engagement work in a peer-reviewed journal.

The vulnerability of working with stakeholders has particular implications for the currently promotion of co-production of knowledge in health services research. Our tendency to see involving stakeholders as a benign 'add on' that will enhance the quality of our research misses the underlying epistemological challenge presented by stakeholder engagement and in particular by co-production as described by Jasanoff (2004):

'Co-production can therefore be seen as a critique of the realist ideology that persistently separates the domains of nature, facts, objectivity, reason and policy from those of culture, values, subjectivity, emotion and politics.' (Jasanoff 2004: 3)

For co-production in particular, the approach is not merely a set of activities, but a fundamental and epistemologically different way of working from conventional knowledge production (Ostrom 1996). There is a long tradition in science and technology studies in surfacing the challenges of stakeholder engagement and co-production (Jasanoff 2004; Callon et al. 2009). However, much of the debate in the health services research continues to focus on limited uptake of research in policy and practice settings (Ferlie et al. 2000; Currie and Suhomlinova 2006). This article provides a timely reminder that the epistemological, institutional and personal challenges that come from within the academic sector also need to be surfaced and explored to support the future role of social science research in health policy and practice.

We do not to argue against the potential contribution of stakeholder engagement and co-production, but show how even good intentions and well-planned engagement activities can be diverted within the existing research funding and research production systems where non-research stakeholders remain at the margins and can even be seen as a threat to academic identity and autonomy.

This study is not without limitations. Not all of the research Equipt team were willing to participate in interviews and so in some instances, it was not possible to explore further issues arising from the observations. A further limitation is that we were looking at one type of technical research output (a return-on-investment tool) and the conclusions may not apply in the same way to other processes of knowledge production and types of research product. Finally, while there was clearly a value to taking a prospective approach to studying stakeholder engagement, this brought particular challenges in terms of the fieldwork. Significant flexibility was required and numerous changes had to be made to the study design to reflect changes in the EQUIPT study and the proposed stakeholder engagement activities.

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