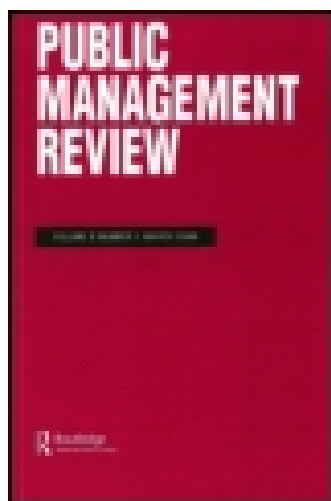


On: 09 August 2015, At: 23:57

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: 5 Howick Place, London, SW1P 1WG



Public Management Review

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rpxm20>

A Systematic Review of Co-Creation and Co-Production: Embarking on the social innovation journey

W. H. Voorberg^a, V. J. J. M. Bekkers^a & L. G. Tummers^b

^a Department of Public Administration, Erasmus University Rotterdam, Rotterdam, The Netherlands

^b Center for the Study of Law & Society, University of California, Berkeley, Berkeley, USA

Published online: 30 Jun 2014.



[Click for updates](#)

To cite this article: W. H. Voorberg, V. J. J. M. Bekkers & L. G. Tummers (2014): A Systematic Review of Co-Creation and Co-Production: Embarking on the social innovation journey, Public Management Review, DOI: [10.1080/14719037.2014.930505](https://doi.org/10.1080/14719037.2014.930505)

To link to this article: <http://dx.doi.org/10.1080/14719037.2014.930505>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Abstract

This article presents a systematic review of 122 articles and books (1987–2013) of co-creation/co-production with citizens in public innovation. It analyses (a) the objectives of co-creation and co-production, (b) its influential factors and (c) the outcomes of co-creation and co-production processes. It shows that most studies focus on the identification of influential factors, while hardly any attention is paid to the outcomes. Future studies could focus on outcomes of co-creation/co-production processes. Furthermore, more quantitative studies are welcome, given the qualitative, case study, dominance in the field. We conclude with a research agenda to tackle methodological, theoretical and empirical lacunas.

Key words

Co-creation, co-production, public-sector innovation, social innovation, systematic review

A SYSTEMATIC REVIEW OF CO-CREATION AND CO-PRODUCTION

Embarking on the social innovation journey

W. H. Voorberg, V. J. J. M. Bekkers and L. G. Tummers

W. H. Voorberg

Department of Public Administration
Erasmus University Rotterdam
Rotterdam
The Netherlands
E-mail: voorberg@fsw.eur.nl

V. J. J. M. Bekkers

Department of Public Administration
Erasmus University Rotterdam
Rotterdam
The Netherlands
E-mail: bekkers@fsw.eur.nl

L. G. Tummers

Center for the Study of Law & Society
University of California, Berkeley
Berkeley
USA
E-mail: tummers@fsw.eur.nl

INTRODUCTION

Social innovation and co-creation are ‘magic concepts’ (cf. Pollitt and Hupe 2011) which, during recent years, have been embraced as a new reform strategy for the public sector, given the social challenges and budget austerity with which governments are wrestling. Social innovation is an inspiring concept, but at the same time it is weakly conceptualized, due to the dominance of grey, policy-oriented literature (Bates 2012; Cels, De Jong, and Nauta 2012; Kamoji, Orton, and Williamson 2009; Mulgan 2009; Mair 2010). In this study, we define social innovation as the creation of long-lasting outcomes that aim to address societal needs by fundamentally changing the relationships, positions and rules between the involved stakeholders, through an open process of participation, exchange and collaboration with relevant stakeholders, including end-users, thereby crossing organizational boundaries and jurisdictions (Hartley 2005; Bason 2010; Osborne and Brown 2011; Sorensen and Torfing 2011; Chesbrough 2003, 2006). In the literature, the participation of end-users is indicated as co-creation (Von Hippel 1987). But what do we know about co-creation with citizens as end-users in a public-sector context?

In the private sector, co-creation is based on two trends. First, corporations are challenged to produce their goods more efficiently. As a result, end-users are defined as possible co-producers who take over specific activities in the production chain (Prahalad and Ramaswamy 2000; Vargo and Lusch 2004; Von Hippel 2007). Second, end-users may become co-creators whose experiences with products or services can be of added value for a company. End-users are an interesting source of product and service innovation (Prahalad and Ramaswamy 2000; Vargo and Lusch 2004). As a result, research showed that co-creation not only influences customer satisfaction and loyalty, but also helps firms to achieve competitive advantage (Grisseemann and Stokburger-Sauer 2012).

But, in the public sector, these end-users are citizens. According to the European Commission (European Commission 2011, 30), ‘social innovation mobilizes each citizen to become an active part of the innovation process’. If citizen participation is considered as a necessary condition for social innovation in the public sector, it is important that we have systematic knowledge regarding the conditions under which citizens are prepared to embark on the ‘social innovation journey’ (cf. Van de Ven et al. 2008). This leads to the following research question:

What do we know about the types, objectives, outcomes and conditions under which co-creation and co-production with citizens take place in innovation processes in the public sector?

This research question can be divided into three sub-questions:

1. *What are the objectives of co-creation and co-production with citizens and what are the relevant types of co-creation in the public sector?*
2. *Which factors influence co-creation and co-production processes with citizens?*
3. *What are the outcomes of co-creation and co-production processes with citizens?*

To answer these questions, we conducted a systematic review of the academic literature regarding public co-creation and co-production with citizens.

This brings us to the demarcation of the co-creation concept. Co-creation refers to the *active involvement* of end-users in various stages of the production process (Pralhad and Ramaswamy 2000; Vargo and Lusch 2004). This is more specific than, for instance, the broad concept of participation, which could also refer to *passive involvement*. In the literature regarding active citizen involvement, the term *co-production* also occurs (Brandsen and Pestoff 2006; Verschuere, Brandsen, and Pestoff 2012). Since the concept co-creation and co-production seems to be related (Vargo and Lusch 2004) or maybe even interchangeable (Gebauer, Johnson, and Enquist 2010), adding the concept of co-production to our review can teach us important lessons about co-creation. Therefore, our systematic review includes both the literature on co-creation during public innovation and the literature on co-production during public innovation (see also Verschuere, Brandsen, and Pestoff 2012). We acknowledge that co-creation is also related to other concepts such as public participation, collaborative governance or community involvement. However, in order to enhance the feasibility of this study, we decided to focus on co-creation and co-production.

The relevance of our review is twofold. First, given the importance that policy makers attach to citizen engagement in social innovation, we aim to provide a more evidence-based overview regarding the conditions under which citizens co-create or co-produce. Second, the choice for a systematic review helps to make the current body of knowledge more transparent in a reproducible way. This contrasts with a more traditional literature review (Liberati *et al.* 2009). During the systematic review, we adhere as much as possible to the widely used 'Preferred Reporting Items for Systematic Reviews and Meta-Analyses' (The PRISMA Statement, referred to as PRISMA from here on), which ensures transparent and complete reporting (Liberati *et al.* 2009; Moher *et al.* 2009).

This brings us to the outline of this article. In the section 'Research strategy', we will describe the methodology used to conduct the review. The section 'Results of the systematic review' will present the results of our review. We conclude our analysis in the section 'Conclusion and future research', with a conclusion and a future research agenda on co-creation and co-production in innovation processes in the public sector.

RESEARCH STRATEGY

Study and report eligibility

Systematic reviews are based on replicable and transparent steps. The checklist for each step is presented in Appendix 1.

PRISMA distinguishes study eligibility and report eligibility criteria (Liberati et al. 2009).

Study eligibility criteria

- *Type of studies* – Records should deal with co-creation or co-production with citizens during the design or implementation of public service delivery processes. The public sector was defined broadly as ‘those parts of the economy that are either in state ownership or under contract to the state, plus those parts that are regulated and/or subsidized in the public interest’ (Flynn 2007, 2).
- *Topic of co-creation/co-production* – Records should contain the words ‘co-creation’ or ‘co-production’ in their title and/or abstract, in order to prevent mix-up with related concepts. We are aware that concepts exist, which seem to refer to comparable or related phenomena such as public participation, co-management or interactive governance. However, the inclusion of these concepts would lead to an enormous increase in the number of records to be examined. For this study, we screened 4,716 records. The inclusion of for instance the concept [participation] would urge us to screen an extra 507,807 records (Scopus showed 265,079 hits on participation and ISI Web of Knowledge 242,728).
- *Type of participants* – The participants in the co-creation/co-production process should minimally be citizens (or their representatives) and public organizations (or their representatives). It is important to stress that we are interested in what happens when ‘ordinary’ citizens take over tasks which are traditionally delegated to public organizations. Therefore, we use the term ‘citizens’, and not for instance private organizations. The same goes for why we use ‘citizens’ and not ‘end-users’, since ‘end-users’ may also refer to private companies and/or multinationals. Public organizations can refer to both individual civil servants and representatives of public organizations in general.
- *Study design* – Only empirical studies are eligible. Since co-production and co-creation are often considered as ‘magic concepts’, our review aims to understand the empirical embedding of both concepts. Hence, we want to establish a more evidence-based understanding of the added value of co-production/co-creation (Pawson 2006). We included all kinds of research designs into our review (case studies, questionnaires, experiments etc.)

Report eligibility criteria

- *Language* – Only English written records were selected, which is common for systematic reviews, given the practical difficulties of translation and the replicability of the review (Wilson, Lipsey, and Derzon 2003).
- *Publication status* – We only included international peer-reviewed journal articles, or books from well-established publishers on the field of public

administration (such as Routledge, Sage, Edward Elgar, Ashgate and Oxford University Press).

- *Year of publication* – We selected records between 1987 and 2013. The year 1987 was chosen as this is the publication year of the seminal work of Von Hippel on co-creation (Von Hippel 1987).

Search strategy

Four search strategies were used. First, electronic databases were searched using the terms [co-creation] and/or [co-production] in the title and/or abstract. The last search was run on 20 May 2013. We did not add the term [innovation], because, the innovative character of the co-creation/co-production practice is often *implicitly* mentioned. Every record is manually screened to analyse whether the involved practices could be considered innovative. Furthermore, our search shows that the combination of [innovation] and [co-creation] and [co-production] resulted, even without a limitation to a specific time period and research domain (e.g. also including the private sector), in only 678 hits within the Scopus (394 hits) and ISI Web of Knowledge (284) databases. Including the term [innovation] would limit our sample too much, since we considered for this article 4,716 records. The found studies are examined on their eligibility. They are screened on title and abstract and, when needed, by reading the full text. Second, we conducted the same search in the top tier Public Administration Journals: *Public Management Review*, *Public Administration*, *Journal of Public Administration*, *Research and Theory*, *Administration and Society* and *Public Administration Review*. Third, we analysed the books on co-creation or co-production. In ‘Google Books’, we searched for related contributions. Fourth, we contacted known experts in the field of co-creation/co-production to supplement our literature list with important records (see Acknowledgements).

Record selection

The screening of all articles and books ultimately led to the inclusion of 122 studies (27 on co-creation and 95 on co-production). Our selection process is presented in Figure 1.

The next section describes the results of our systematic review.

6 Public Management Review

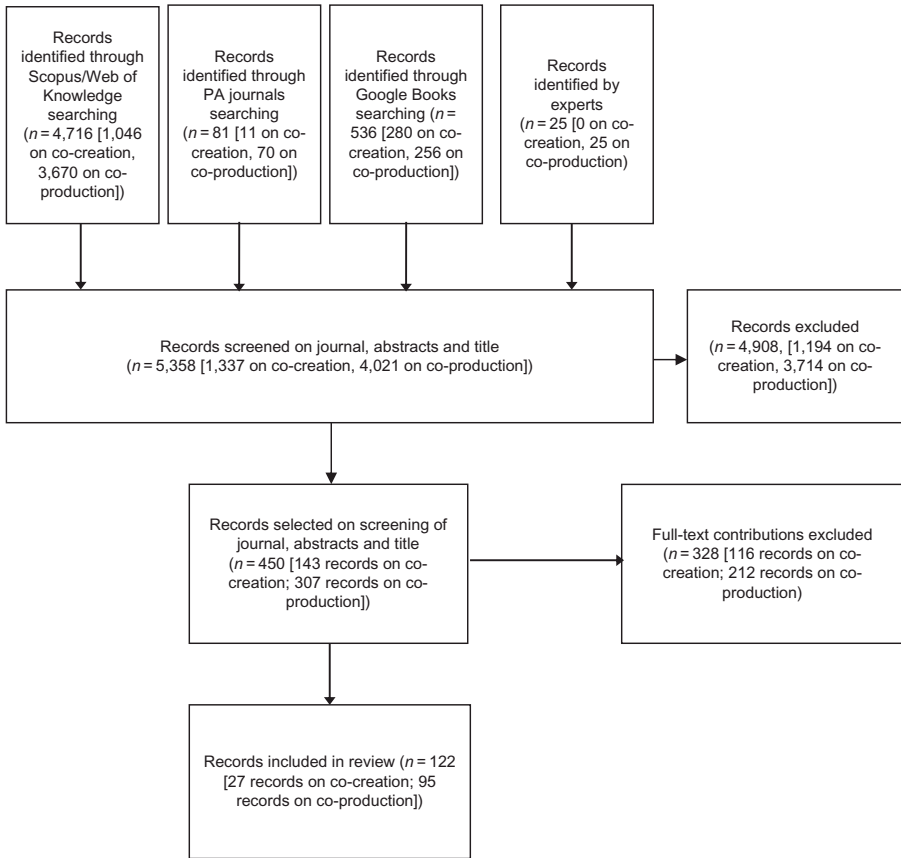


Figure 1: Flow diagram of the search strategy

RESULTS OF THE SYSTEMATIC REVIEW

Record characteristics

Before answering our research questions, we address some characteristics of the records found.

Diversity in journals

The articles found are published in a large number of different journals. The journals which contained most studies were *Public Management Review* (9), *International Journal of Voluntary and Non-profit Organizations* (7) and *World Development* (6).

Policy sector diversity

The review shows that co-creation/co-production is a practice to be found in numerous policy sectors (like regional media, library services and garbage disposal), but predominantly in health care (30 records) and education (15 sector). The latter can be explained by the more direct relationships established between citizens and public officials in these sectors when compared with other sectors, such as water management.

Methods used

Public co-creation/co-production was predominantly examined in single (51 per cent) or comparative case studies (34 per cent). These case studies were often qualitative in their research approach, using interviews and document analysis. Quantitative methods were used much less (15 per cent). Hence, we see that a qualitative approach prevails when studying co-creation/co-production practices. This also implies that the context of co-creation and the factors/effects within this context enjoyed substantial attention. However, less is known about the generalizability of these factors or effects (see the section 'Influential factors').

Definitions, types and objectives

Types of co-creation/co-production

Table 1 presents the types of co-creation/co-production found. We distinguish three types which differ in their degree of citizen involvement. Type 1 involves the citizen as *co-implementer* of public services. For instance, Benari (1990) described the participation of citizens in garbage disposal services. In order to effectively manage garbage disposal, the assistance of citizens is required to separate types of garbage. Hence, citizens only perform some implementation tasks. The second type defines the citizen as *co-designer*. Very often, the initiative lies within the public organization, but citizens decide how the service delivery is being designed. For instance, Wipf, Ohl, and Groeneveld (2009) described how citizens participated in the design and maintenance of outdoor

Table 1: Types of co-creation/co-production

<i>Type</i>	<i>Co-creation</i>	<i>Co-production</i>	<i>Total</i>
Citizen as a co-implementer	15 (51%)	53 (50%)	68 (50%)
Citizen as a co-designer	7 (25%)	30 (28%)	37 (28%)
Citizen as an initiator	4 (14%)	10 (9%)	14 (9%)
No specific type	3 (10%)	14 (13%)	17 (13 %)
Total	29 (100%)	107 (100%)	136 (100%)

Note: Total higher than 122 as some studies described multiple types of involvement.

recreation, after being invited by local government. The third type represents the citizen as an *initiator* and the government as an actor that follows. For instance, Rossi (2004) described an initiative of citizens themselves restoring monuments, when the historical centre of Naples was reopened for the public.

Table 1 shows that the distinction between co-production and co-creation does not depend so much on the type of citizen involvement. In both co-creation and co-production studies, the citizen as a co-implementer has been studied the most extensively. Furthermore, the dispersion between the different types is rather equal. This challenges Bason's (2010) assumption that in the co-creation literature the emphasis has been put on the citizen as co-designer, while in the co-production literature, the emphasis primarily lies on the citizen as co-implementer. Our study shows that both concepts are closely linked. Some regard co-creation as co-production and some mention co-production while it refers to co-creation. Furthermore, it is surprising that 13 per cent of the authors did not mention a specific level of co-creation/co-production. In these cases, no detailed assessment of the specifics of citizen involvement was described.

Definitions

When we compared the record definitions of co-creation/co-production, we see that – to a large extent – both are defined similarly. In both literature streams, citizen are considered as a valuable *partner* in public service delivery (e.g. Baumer, Sueyoshi, and Tomlinson 2011; Cairns 2013; Bovaird 2007; Meijer 2011). We see some variations in the nature of these partnerships. In some cases, the creation of *sustainable* relations between government and citizens is being stressed (e.g. Ryan 2012); in other cases the *joint responsibility* of professionals and citizens for public service delivery (e.g. Lelieveldt et al. 2009) is put forward; while in again other cases simply *the involvement* of citizens in the process (design, production or delivery) of public service delivery (e.g. Ostrom 1996) is assessed. However, the main difference in the definitions between co-creation and co-production is that, in line with the work of Vargo and Lusch (2004), the co-creation literature puts more emphasis on co-creation as *value* (e.g. Gebauer, Johnson, and Enquist 2010).

Furthermore, some authors (19 per cent) did not present a specific definition at all, possibly for two reasons. First, in some studies, co-creation with citizens was not the main subject of study. Some authors present the topic of co-creation merely as a factor to explain policy effectiveness (Cairns 2013; Fuglsang 2008). Second, the absence of a definition can be related to the practical oriented nature of the study (e.g. Davidsen and Reventlow 2011), i.e. aimed at the creation of a manual for citizen involvement.

Hence, we can conclude that empirically co-creation and co-production are used as interchangeable concepts. However, the question can be raised whether this supports the creation of conceptual clarity.

Table 2: Objectives

<i>Objectives</i>	<i>N</i>
Gaining more effectiveness	22 (18%)
Gaining more efficiency	13 (11%)
Gaining customer satisfaction	10 (8%)
Increasing citizen involvement	8 (7%)
Other objectives	5 (4%)
No objective mentioned	64 (52%)
Total	122 (100%)

Objectives

Table 2 shows the potential objectives that practices of co-creation/co-production must achieve.

Table 2 shows that many contributions did not mention a specific objective at all. There seems to be an implicit assumption that involvement of citizens is a virtue in itself, like democracy and transparency, thereby also stressing that co-creation as a process is a goal in itself. In that case, the process of citizen involvement is considered, in a normative way, as something that is appropriate. This assumption is strengthened by the fact that in eight different studies the purpose of co-creation/co-production is simply the involvement of citizens (e.g. Lelieveldt *et al.* 2009). In studies where objectives were mentioned, these were often related to efficiency and effectiveness. Hence, in these cases, the added value of co-production and co-creation was primarily justified by referring to more economic values.

The next step is to identify the factors that affect the way in which these objectives are being accomplished.

Influential factors

Our analysis found a variety of influential factors which we categorized into eight categories (Table 3). These factors are sometimes qualified as ‘supporting’ and ‘frustrating’. They can be considered as ‘two sides of the same coin’. For instance, some records mention the acceptance of the citizen/patient as the key driver for successfully establishing co-production relations (e.g. Corburn 2007; Leone *et al.* 2012; Ryan 2012), while other records mentioned the averse attitude towards citizen participation (e.g. Bovaird and Loeffler 2012; Vamstad 2012).

The identified influential factors can be separated into being at either the organizational or the citizen side of co-creation.

Table 3: Dominant influential factors

Influential factor on the organizational side	<i>N</i>
Compatibility of public organizations with citizen participation	47 (46%)
Open attitude towards citizen participation	23 (22%)
Risk-averse administrative culture	19 (18%)
Presence of clear incentives for co-creation (win/win situation)	14 (14%)
Total	103 (100%)
Influential factors on the citizen side	<i>N</i>
Citizen characteristics (skills/intrinsic values/marital status/family composition/level of education)	10 (33%)
Customer awareness/feeling of ownership/being part of something	9 (30%)
Presence of social capital	9 (30%)
Risk aversion by customers/patients/citizens	2 (7%)
Total	30 (100%)

Note: Total higher than 122 as some studies described multiple factors.

Organizational factors

On the organizational side, the following factors are mentioned, which seem to be independent from a specific policy domain, service or role, like the co-production of safety (Weaver 2011), knowledge (Evans, Hills, and Orme 2012), health (Lindahl, Lidén, and Lindblad 2011) or education (Díaz-Méndez and Gummesson 2012). First, there is the *compatibility* of public organizations with respect to co-creation/co-production. This may refer to the presence or the absence of inviting organizational structures and procedures within the public organization (e.g. Andrews and Brewer 2013; Bovaird and Loeffler 2012; Meijer 2012b) or the presence or absence of a decent infrastructure to communicate with citizens (e.g. Davidsen and Reventlow 2011). Second, many authors mentioned that the *attitude* of public officials and politicians influence to what extent co-creation/co-production occurs (e.g. Davis and Ruddle 2012; Gebauer, Johnson, and Enquist 2010; Leone et al. 2012). For instance, Ryan (2012) emphasized that a precondition was the prior acceptance of the right of the client to be an eligible partner in achieving public safety. Roberts et al. (2013) report that many politicians, managers and professionals consider co-production as unreliable, given the unpredictable behaviour of citizens. Therefore, political and professional reluctance to lose status and control was considered as an explanation for the unwillingness to support co-creation/co-production. Third, looking beyond the attitude aspect, authors have stressed the influence of a risk-averse, conservative *administrative culture* as an explanation why citizens were not considered to be a reliable resource providing partner (e.g. Baars 2011; Talsma and Molenbroek 2012). Hence, the lack of a tradition to consider citizens as associates, rather than service-receivers, implies that there is no ‘institutional space’ to invite citizens as equals (Maiello et al. 2013). Fourth, many authors mentioned the importance of having clear *incentives* for co-creation/co-production. For instance, for public officials, it is often unclear to what extent public services can be improved by incorporating

citizens (e.g. Evans, Hills, and Orme 2012) or how co-creation creates budgetary benefits (Abers 1998) or even increases customer interest (Lam 1996). Without clarity about these incentives, administrators do not see its usefulness (e.g. Fuglsang 2008).

Citizen factors

On the citizen side, the following factors can be mentioned. First, personal characteristics of citizens determine to a large extent, whether citizens are willing to participate. Wise, Paton, and Gegenhuber (2012) showed that intrinsic values, such as loyalty, civic duty and the wish to improve the government positively, influence the willingness of citizens to participate. Also personal traits like education and family composition play a role, which Sundeen (1988) demonstrated. People which had received more education than high school were more aware of community needs and were more able to articulate their own needs. They also possessed the administrative skills to participate. Second, several authors identified the importance of a *sense of ownership* and the *perceived ability* of citizens to participate. Talsma and Molenbroek (2012) showed that, because of a feeling of being responsible (sense of ownership) for the well-being of eco-tourists in India, local people put much effort into improving these services. So, as well as people needs to be willing to participate, they need to be aware of how and where they can influence public services, but they also need to feel it as their responsibility. Third, *social capital* is also needed for co-creation and co-production. Ostrom (1996) mentions that, in order to involve citizens in a sustained way in infrastructure projects in Brazil, not only is the activation of citizens required, but also social capital needs to be energized in order to fulfil the promises of collective action. Subsequently, Schafft and Brown (2000) showed that the local organization of social capital implied that Hungarian Romas were able to initiate several profitable projects. By the enforcement of social capital, people looked after each other and had the feeling that they were not alone in their minority position. So, social capital became an important ingredient to develop a robust commitment. Last, citizens also needed to have *trust* in the co-creation initiative. In some cases, a substantial risk-averse attitude of patients towards co-creative initiatives was also shown. This was often related to the extent to which the patient saw doctors and nurses as an authority (Lachmund 1998).

A closer look to these factors shows that they are interrelated. We present this relationship in Figure 2. Within a risk-averse administrative culture, it seems plausible that the attitude of public officials means that they are averse to citizen participation. Hence, public organizations lack the practical organizational tools required for active citizen involvement. The outcome is that, if sustainable relationships between public organizations and citizens are not being established, additional actions are required to establish these relationships with citizens. We describe the actions found in our review in the next subsection.

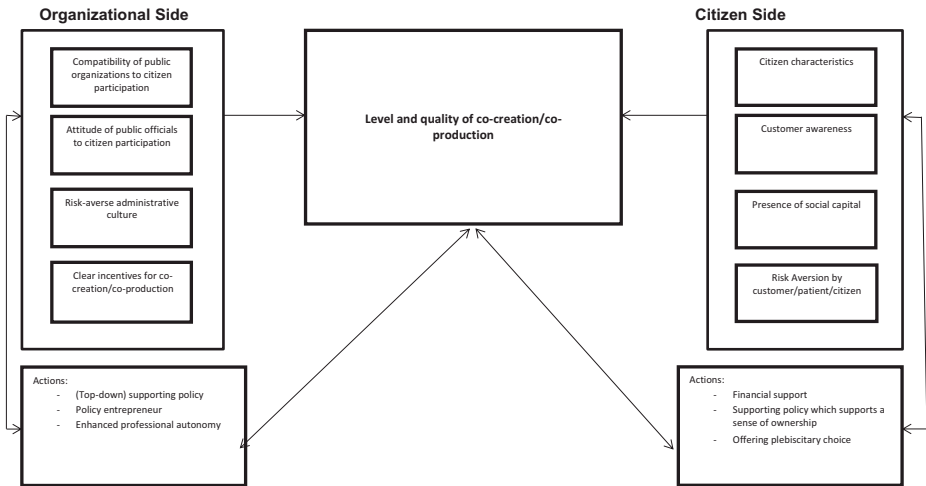


Figure 2: Correlation between identified influential factors

Identified actions in order to overcome barriers

The actions to overcome barriers were aimed at influencing elements on both the organizational and the citizen side. Actions on the organizational side refer, for example, to a (top-down) policy that supports co-creation/co-production (e.g. Pestoff 2009). Furthermore, a policy entrepreneur can also be appointed in order to promote the co-creation/co-production initiative (Fuglsang 2008). Other research noted that the enhancement of discretionary autonomy for professionals is also required (e.g. Gill, White, and Cameron 2011).

On the citizen side, actions which are repeatedly mentioned involve the lowering of thresholds for citizens to participate. This can refer to a lowering of the participation costs (Weinberger and Jütting 2001) or providing financial support (Pestoff 2006). Also mentioned was the need for an inviting policy to generate a feeling of ownership (Lindh, Lidén, and Lindblad 2011; Ostrom 1996). Last, when public organizations or officials approach citizens to participate, they should offer them a plebiscitary choice, instead of asking them about complicated policy issues (Wise, Paton, and Gegenhuber 2012). Peculiar is, though, that the responsibility to take these actions seems to lie with the public organization. The mentioned actions all refer to 'something that the public organization must do'.

Outcomes

In response to our third research question, *what are the outcomes of co-creation and co-production processes with citizens*, we analysed the reported outcomes. We conclude that

Table 4: Types of study results

<i>Type of study results</i>	<i>N</i>
Identification of influential factors	43 (35%)
Report on specific goals to be met	24 (20%)
Identification of different types of co-creation/co-production	22 (18%)
Other	33 (27%)
Total	122 (100%)

in most records the study that was carried out was not aimed at the identification or evaluation of specific results of the co-creation/co-production process. Rather, most studies were dedicated to the identification of influential factors or to find a typology of public co-creation/co-production. We present the results in [Table 4](#).

The dominance of studies dedicated to the identification of influential factors shows that most academics aimed their study at the co-creation/co-production process rather than their outcomes (35 per cent). A typical example is Alford (2002) who studied how influential incentives (sanctions, material rewards and non-material rewards) are on the participation behaviour of clients in social welfare programmes. We have included these findings in our preceding section ‘Influential factors’. Other authors aimed their studies at the identification or conceptualization of different co-production/co-creation types, while not discussing their outcomes (18 per cent). For instance, Pestoff (2009) examined the different participation levels of parents in childcare services in European countries within different forms of provision (i.e. public, private for-profit and third sector). Only a handful of authors did describe specific outcomes as a result of co-creation/co-production processes (20 per cent). These are shown in [Table 5](#).

[Table 5](#) shows that if concrete outcomes are reported, they mostly refer to an increase (or decrease) in effectiveness. Leone *et al.* (2012) analysed that through the co-production of health care for heart failure patients, the treatment quality increased. Baars (2011)

Table 5: Types of outcomes

<i>Type of outcome</i>	<i>N</i>
Gaining more effectiveness	14 (59%)
Increasing citizen involvement	6 (25%)
Gaining more efficiency	1 (4%)
Gaining customer satisfaction	1 (4%)
Strengthening social cohesion	1 (4%)
Democratizing public services	1 (4%)
Total	24 (100%)

showed that by incorporating farmers as specialists on the field of organic farming, knowledge about how to organize and maintain organic farming is gathered more easily. However, some authors presented how effectiveness was not increased by co-creation/co-production. Benari (1990) showed that co-production in Japanese garbage disposal did not generate positive outcomes. People simply did not divide their garbage into different categories. Furthermore, Meijer (2011) showed that co-production is not to be considered as something that *directly* leads to a more neighbourhood safety.

However, given the limited number records that reported on the outcomes of co-creation/co-production, we cannot definitely conclude whether co-creation/co-production can be considered as beneficial. Furthermore, our previous observation, that co-creation/co-production is being considered as a virtue in itself, is strengthened by the dominance of studies dedicated to influential factors and the attempts to offer a typology. This is underlined by six records which described these outcomes in terms of enhanced participation.

CONCLUSION AND FUTURE RESEARCH

Policy makers and politicians consider co-creation/co-production with citizens as a necessary condition to create innovative public services that actually meet the needs of citizens, given a number of societal challenges, like ageing and urban regeneration, and all of this within the context of austerity. Hence, co-creation/co-production seems to be considered as a cornerstone for social innovation in the public sector. But what do we empirically know about co-creation/co-production, given their proclaimed importance? How evidence based is the claim that co-creation/co-production is a relevant renewal strategy?

In order to increase our empirical and conceptual understanding of the literature on co-creation and co-production, we conducted a systematic review of: (a) the objectives and types of co-creation/co-production (RQ 1); (b) the influential factors (RQ 2) and, (c) the outcomes of co-creation/co-production processes (RQ 3). In this section, some conclusions will be drawn and a future research agenda will be drafted. However, before doing so, we must acknowledge an important limitation: A main selection criterion was that the journal article or book should contain the word ‘co-creation’ or ‘co-production’ in the title or abstract. It is possible that studies were dedicated to the topic of co-creation/co-production, but did not mention the words in their abstract or title and we may have overlooked relevant studies. Related to this, literature, such as on ‘interactive governance’, ‘(public) participation’ and ‘open innovation’, was not included, given the exponential growth of the number of records to be studied although we acknowledge that analysing these literature streams is also be valuable. For us, this was practically impossible since for this study already 4,716 records had to be screened. Future studies could address this flaw.

Returning to the first research question with regard to how co-creation/co-production is defined, we observed that citizens are perceived as an important partner in developing and re-designing public services. However, we concluded that in the literature the concepts of co-creation and co-production were often seen as interchangeable. There is empirically no striking difference between both concepts, and within bodies of knowledge different meanings are given to both concepts (Evers and Ewert 2012). This does not contribute to conceptual clarity (Osborne and Strokosch 2013). Some clarity can be provided by making a difference between three types of co-creation (in terms of degree of citizen involvement) in social innovation: (a) citizens as co-implementer: involvement in services which refer to the transfer of implementing activities in favour of citizens that in the past have been carried out by government, (b) citizens as co-designer: involvement regarding the content and process of service delivery and (c) citizens as initiator: citizens that take up the initiative to formulate specific services. Furthermore, based on this distinction, we would like to reserve the term 'co-creation' for involvement of citizens in the (co)-initiator or co-design level. Co-production is being considered as the involvement of citizens in the (co)-implementation of public services.

Second, if we look at the objectives that co-creation/co-production must achieve, the most remarkable observation is that in more than half of the eligible contributions, no specific objective as to why it is important to co-create/co-produce is mentioned. Hence, we may conclude that co-creation/co-production is perceived as a value in itself, which is also supported by the observation that several authors addressed the increase of citizen involvement as an objective to be met. Other objectives that were mentioned are being more effective, gaining more efficiency and creating more customer satisfaction.

Third, we have also looked at possible factors that influence the participation of citizens in co-creation and co-production. We made a difference between factors on the organizational side and factors on the citizen side. On the organization side, most of them involve the 'compatibility of public organizations to citizen participation'. This may refer to, for example, a proper communication infrastructure or training facilities for both citizens and public officials. Another important factor is the attitude of administrators and politicians to involve citizens as valuable partners. As it turns out, most authors identified that these attitudes are often not really inviting to citizen involvement. A third important factor seems to be the risk-averse culture of public-sector organizations. Civil involvement is traditionally regarded as uncontrollable and unreliable. Therefore, the administrative environment is not aimed at incorporating citizens in public service delivery.

On the citizen side, factors identified refer to the willingness to participate. These involve the education level of individual citizens, family structure and personal characteristics. Next to this willingness, citizens need to be aware of their ability and possibility to actual influence public services. A last important influential factor seems

to be the presence of social capital. Social capital is required in order to create sustainable relations between public organizations and citizens. It is also important to note that these factors are related and must be considered as subsequent to each other. If these factors seem to be lacking (on both the organizational and the citizen side), the responsibility to succeed co-creation/co-production initiatives seems to lie with the public organization. These, because of the additional actions which came across, all refer to 'something that the public organization must do'. Examples of these actions are the assignment of a policy entrepreneur, implementing supportive policy or financial support.

Fourth, we also analysed the outcomes of co-creation/co-production. In most cases, the conducted analyses related to either different types of co-creation/co-production, or involved a description or identification of the factors which influence the process of co-creation/co-production. However, studies that address the outcomes of the co-production/co-creation process are scarce. If specific outcomes were reported, the emphasis was on whether effectiveness of public service is being enhanced. The limited number of specific outcomes also adds up to our idea that co-creation/co-production is primarily considered as a virtue in itself, which does not need to be legitimized by referring to external objectives.

What do these results imply for the role of co-creation/co-production in social innovation? In order to address this question, a number of considerations need to be taken into regard: First, we need to separate the process of co-creation from the outcomes. If we look at the influential factors that have been identified we can say that we are now able to assess if and how the process of co-production/co-creation comes to being. However, if we look at the outcomes of the co-creation/co-production process and relate to possible social innovation outcomes, we can argue that we do not know if co-production/co-creation contributes to outcomes which really address the needs of citizens in a robust way, thereby acting as a 'game changer'. To some extent, this would put the claims that policy makers make in relation to the 'magic' of social innovation into perspective. Second, we also do not know, if there is a relationship between several degrees of citizen involvement (co-implementing, co-design and initiator) and the outcomes of social innovations. As a consequence, further research challenges lie in the examination of outcomes of co-creation/co-production as such and in relation to social innovation in particular.

Given these conclusions, how does a possible future research agenda look like? The first suggestion is to be more specific about the type of co-creation or co-production being studied and offer conceptual clarity between this and related concepts. Our literature review may help to provide this clarity in two ways: First, we would like to emphasize that future studies should explicitly address the role of the citizen. As indicated, most studies are focused on citizens as a co-implementer, while only a few looked at the role of citizens as a co-designer or co-initiator. Therefore, future studies could focus on the latter types. In addition, since in co-creation and co-production

processes the role of involved stakeholders is formulated within ‘a field of tension where users and organizations are urged to cope with contradictory role expectations but similarly adopt, reinterpret and subvert given role models against a backdrop of individual identities and self-construction’ (Evers and Ewert 2012, 77), it might be useful to explicitly research the relation between this diversity in roles and the outcomes of co-creation processes.

Second, it is important to understand under what conditions citizen participation can be linked to more concrete and functional outcomes. Are specific needs in fact better served by co-creation processes? We noted that few studies (only 20 per cent) explicitly looked at explicit and long-lasting outcomes. This contributes to the idea that co-creation/co-production is primarily considered as a virtue in itself, which does not need to be legitimized by reference to external goals. However, if we use a rational, functional or goal-oriented approach, the outcomes can be somewhat disappointing. We can also argue that the added value of co-creation/co-production should be assessed from a political and cultural perspective in which innovation and co-creation/co-production is defined as a process of sense-making in which citizen involvement is seen as having important political value (Weick 1969, 1995). Then, co-creation processes are important symbolic activities in which an organization tries to establish a process of normative integration between the central and dominant values and developments in public organizations on the one hand and in society on the other hand. In this process, citizen participation is regarded as an important mechanism to achieve normative integration (DiMaggio and Powell 1991, 2000). In doing so, co-creation can be seen as a way of ‘conspicuous production’ (Feller 1981) and a way of sense-making ‘myth’ or ‘ceremony’ in order to achieve political legitimacy and thus stress the importance of citizen participation as a relevant process that can be used as strategy to be applied to address issues that are defined in the literature as the perceived existence of a possible democratic deficit (Bekkers 2007) or performance gap (Salge and Vera 2012). Both concepts deal with the issue that legitimacy of government is under pressure, due to the fact that the production of public services does not really address the needs of citizens, which was one of the reasons to embark on the social innovation journey. This is, perhaps, even more important than the specific functional goals that have been achieved (Meyer and Rowan 1977). This implies that future research must conclude to what extent co-creation/co-production contributes to bridge this perceived democratic or performance gap, thereby also acknowledging its symbolic function.

The third suggestion is methodological. The literature on co-creation and co-production relies to a great extent on (single) case studies. This is understandable given the importance of contextual factors. However, there are a few possibilities to generalize. First, the comparison between cases from different countries can show to what extent state tradition or governance structure influence co-creation processes (see also Verschuere, Brandsen, and Pestoff 2012). Second, quantitative approaches can show the weight of influential factors. For instance, what is the impact of negative attitudes of public officials compared to the impact of the actions of policy

entrepreneurs? Finally, in order to determine possible causal linkages, experiments are required. This could prove whether, for instance, user satisfaction is improved because of participation in public service design, or if this is due to other factors (see also Dunleavy et al. 2005).

The last research suggestion is empirical. We would recommend studying co-creation and co-production in different policy sectors. The review shows that most empirical data are derived from records within the education and health care sector. This is not surprising, given the traditional direct relationships between service provider and service user. However, it can be valuable to expand this body of knowledge to other domains. Future research must find out to what extent the policy field in which co-creation is implemented is influential with respect to the type and effects of these processes.

ACKNOWLEDGEMENT

In order to conclude our research and to complete our database of relevant records, we have consulted a number of experts in the field of co-creation/co-production. The consulted experts are Prof. Tony Bovaird of the University of Birmingham (United Kingdom); Prof. Taco Brandsen of the Radboud University Nijmegen (the Netherlands); Prof. Victor Pestoff of the Institute for Civil Society Studies, in Ersta-Sköndal University College, Stockholm (Sweden); Prof. Stephen Osborne of the University of Edinburgh (United Kingdom); and, Prof. Bram Verschuere of the University of Gent (Belgium). We are very thankful for their contributions.

FUNDING

This work was supported by the European Union Seventh Framework Programme [320090] (Project Learning from Innovation in Public Sector Environments, LIPSE), Socio-economic Sciences and Humanities. LIPSE is a research program under the European Commission's 7th Framework Programme as a Small or Medium-Scale Focused Research Project (2011–2014). The project focuses on studying social innovations in the public sector (www.lipse.org).

REFERENCES

*Included in systematic review

- Abers, R. 1998. "From Clientelism to Cooperation: Local Government, Participatory Policy, and Civic Organizing in Porto Alegre, Brazil." *Politics & Society* 26 (4): 511–537. doi:10.1177/0032329298026004004.

- *Alford, J. 2002. "Why Do Public-Sector Clients Coproduce? Toward a Contingency Theory." *Administration & Society* 34 (1): 32–56. doi:10.1177/0095399702034001004.
- *Andrews, R., and G. Brewer. 2013. "Social Capital, Management Capacity and Public Service Performance: Evidence from the US States." *Public Management Review* 15 (1): 19–42. doi:10.1080/14719037.2012.662445.
- *Baars, T. 2011. "Experiential Science; Towards an Integration of Implicit and Reflected Practitioner-Expert Knowledge in the Scientific Development of Organic Farming." *Journal of Agricultural & Environmental Ethics* 24 (6): 601–628. doi:10.1007/s10806-010-9281-3.
- *Bason, C. 2010. *Leading Public Sector Innovation*. Bristol: Policy Press.
- Bates, S. 2012. *The Social Innovation Imperative: Create Winning Products, Services, and Programs that Solve Society's Most Pressing Challenges*. New York: McGraw-Hill.
- *Baumer, E., M. Sueyoshi, and B. Tomlinson. 2011. "Bloggers and Readers Blogging Together: Collaborative Co-Creation of Political Blogs." *Computer Supported Cooperative Work (CSCW)* 20 (1–2): 1–36. doi:10.1007/s10606-010-9132-9.
- Bekkers, V., ed. 2007. *Governance and the Democratic Deficit: Assessing the Democratic Legitimacy of Governance Practices*. Aldershot: Ashgate.
- *Benari, E. 1990. "A Bureaucrat in Every Japanese Kitchen?: On Cultural Assumptions and Coproduction." *Administration & Society* 21 (4): 472–492. doi:10.1177/009539979002100405.
- *Bovaird, T. 2007. "Beyond Engagement and Participation: User and Community Co-Production of Public Services." *Public Administration Review* 67 (5): 846–860. doi:10.1111/j.1540-6210.2007.00773.x.
- *Bovaird, T., and E. Loeffler. 2012. "From Engagement to Co-Production: The Contribution of Users and Communities to Outcomes and Public Value." *Voluntas* 23 (4): 1119–1138. doi:10.1007/s11266-012-9309-6.
- *Brandsen, T., and V. Pestoff. 2006. "Co-Production, the Third Sector and the Delivery of Public Services." *Public Management Review* 8 (4): 493–501. doi:10.1080/14719030601022874.
- *Cairns, G. 2013. "Evolutions in Food Marketing, Quantifying the Impact, and Policy Implications." *Appetite* 62: 194–197. doi:10.1016/j.appet.2012.07.016.
- Cels, S., J. De Jong, and F. Nauta. 2012. *Agents of Change: Strategy and Tactics for Social Innovation*. Washington, DC: Brookings.
- Chesbrough, H. 2003. *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Cambridge, MA: Harvard Business School Press.
- Chesbrough, H. 2006. "Open Innovation: A New Paradigm for Understanding Industrial Innovation." In *Open Innovation: Researching a New Paradigm*, edited by H. Chesbrough, W. Vanhaverbeke, and J. West, 1–12. Oxford: Oxford University Press.
- Corburn, J. 2007. "Community Knowledge in Environmental Health Science: Co-Producing Policy Expertise." *Environmental Science & Policy* 10 (2): 150–161.
- *Davidsen, A., and S. Reventlow. 2011. "Narratives about Patients with Psychological Problems Illustrate Different Professional Roles among General Practitioners." *Journal of Health Psychology* 16 (6): 959–968. doi:10.1177/1359105310397219.
- Davis, A., and K. Ruddle. 2012. "Massaging the Misery: Recent Approaches to Fisheries Governance and the Betrayal of Small-Scale Fisheries." *Human Organization* 71 (3): 244–254.
- *Díaz-Méndez, M., and E. Gummeson. 2012. "Value Co-Creation and University Teaching Quality: Consequences for the European Higher Education Area (EHEA)." *Journal of Service Management* 23 (4): 571–592. doi:10.1108/09564231211260422.
- DiMaggio, P., and W. Powell. 1991. *The New Institutionalism in Organizational Analysis*. Chicago, IL: University of Chicago Press.

- DiMaggio, P., and W. Powell. 2000. "The Iron Cage Revisited Institutional Isomorphism and Collective Rationality in Organizational Fields." *Economics Meets Sociology in Strategic Management* 17: 143–166. doi:10.1016/S0742-3322(00)17011-1.
- Dunleavy, P., H. Margetts, S. Bastow, and J. Tinkler. 2005. "New Public Management is Dead – Long Live Digital Era Governance." *Journal of Public Administration Research and Theory* 16 (3): 467–494. doi:10.1093/jopart/mui057.
- European Commission. 2011. *Empowering People, Driving Change: Social Innovation in the European Union*. Luxembourg: Publications of the European Union.
- Evans, S., S. Hills, and J. Orme. 2012. "Doing More for Less? Developing Sustainable Systems of Social Care in the Context of Climate Change and Public Spending Cuts." *British Journal of Social Work* 42 (4): 744–764. doi:10.1093/bjsw/bcr108.
- Evers, A., and B. Ewert. 2012. "Co-Production: Contested Meanings and Challenges for User Organizations." In *New Public Governance, the Third Sector and Co-Production*, edited by T. Brandsen, V. Pestoff, and B. Verschuere, 61–78. New York: Routledge.
- Feller, I. 1981. "Public Sector Innovation as Conspicuous Production." *Policy Analysis* 7 (1): 1–20.
- Flynn, N. 2007. *Public Sector Management*. Thousand Oaks, CA: Sage.
- *Fuglsang, L. 2008. "Capturing the Benefits of Open Innovation in Public Innovation: A Case Study." *International Journal of Services, Technology and Management* 9 (3–4): 234. doi:10.1504/IJSTM.2008.019705.
- *Gebauer, H., M. Johnson, and B. Enquist. 2010. "Value Co-Creation as a Determinant of Success in Public Transport Services: A Study of the Swiss Federal Railway Operator (SBB)." *Managing Service Quality* 20 (6): 511–530. doi:10.1108/09604521011092866.
- *Gill, L., L. White, and I. Cameron. 2011. "Service Co-Creation in Community-Based Aged Healthcare." *Managing Service Quality* 21 (2): 152–177. doi:10.1108/09604521111113447.
- Grissemann, U. S., and N. E. Stokburger-Sauer. 2012. "Customer Co-Creation of Travel Services: The Role of Company Support and Customer Satisfaction with the Co-Creation Performance." *Tourism Management* 33 (6): 1483–1492.
- Hartley, J. 2005. "Innovation in Governance and Public Services." *Past and Present, Public Money & Management* 25 (1): 27–34.
- Kamoji, W., L. Orton, and M. Williamson. 2009. *Social Innovation in Canada: An Update*. Ottawa: Canadian Policy Research Networks.
- *Lachmund, J. 1998. "Between Scrutiny and Treatment: Physical Diagnosis and the Restructuring of 19th Century Medical Practice." *Sociology of Health & Illness* 20 (6): 779–801. doi:10.1111/1467-9566.00129.
- *Lam, W. F. 1996. "Institutional Design of Public Agencies and Co-Production: A Study of Irrigation Associations in Taiwan." *World Development* 24 (6): 1039–1054. doi:10.1016/0305-750X(96)00020-4.
- *Lelieveldt, H., K. Dekker, B. Volker, and R. Torenvlied. 2009. "Civic Organizations as Political Actors: Mapping and Predicting the Involvement of Civic Organizations in Neighborhood Problem-Solving and Coproduction." *Urban Affairs Review* 45 (1): 3–24. doi:10.1177/1078087409332303.
- *Leone, R., C. Walker, L. C. Curry, and E. Agee. 2012. "Application of a Marketing Concept to Patient-Centred Care: Co-Producing Health with Heart Failure Patients." *Online Journal of Issues in Nursing* 17 (2). doi:10.3912/OJIN.Vol17No01PPT03.
- Liberati, A., D. Altman, J. Tetzlaff, C. Mulrow, P. C. Gotzsche, J. Loannidis, and D. Moher. 2009. "The PRISMA Statement for Reporting Systematic Reviews and Meta-Analyses of Studies that Evaluate Health Care Interventions: Explanation and Elaboration." *Annals of Internal Medicine* 151 (4): W-65–W-94. doi:10.7326/0003-4819-151-4-200908180-00136.
- *Lindahl, B., E. Lidén, and B. Lindblad. 2011. "A Meta-Synthesis Describing the Relationships between Patients, Informal Caregivers and Health Professionals in Home-Care Settings." *Journal of Clinical Nursing* 20 (3–4): 454–463. doi:10.1111/j.1365-2702.2009.03008.x.

- *Maiello, A., C. V. Viegas, M. Frey, J. L. Ribeiro, and J. L. Viegas. 2013. "Public Managers as Catalysts of Knowledge Co-Production? Investigating Knowledge Dynamics in Local Environmental Policy." *Environmental Science and Policy* 27: 141–150. doi:10.1016/j.envsci.2012.12.007.
- Mair, J. 2010. "Social Entrepreneurship: Taking Stock and Looking Ahead." In *Handbook of Research on Social Entrepreneurship*, edited by A. Fayolle and H. Matlay, Chapter 2. Cheltenham: Edward Elgar.
- *Meijer, A. 2011. "Networked Co-Production of Public Services in Virtual Communities: From a Government-Centric to a Community Approach to Public Service Support." *Public Administration Review* 71 (4): 598–607. doi:10.1111/j.1540-6210.2011.02391.x.
- *Meijer, A. 2012. "Co-Production in an Information Age: Individual and Community Engagement Supported by New Media." *Voluntas* 23 (4): 1156–1172. doi:10.1007/s11266-012-9311-z.
- Meyer, J., and B. Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology*: 340–363. doi:10.1086/226550.
- Moher, D., A. Liberati, J. Tetzlaff, and D. G. Altman. 2009. "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement." *Annals of Internal Medicine* 151 (4): 264. doi:10.7326/0003-4819-151-4-200908180-00135.
- Mulgan, J. 2009. *The Art of Public Strategy*. Oxford: Oxford University Press.
- Osborne, S., and K. Strokosch. 2013. "It Takes Two to Tango? Understanding the Co-Production of Public Services by Integrating the Services Management and Public Administration Perspectives." *British Journal of Management* 24 (S1): S31–S47. doi:10.1111/1467-8551.12010.
- Osborne, S., and L. Brown. 2011. "Innovation in Public Services: Engaging with Risk." *Public Money & Management* 31 (1): 4–6. doi:10.1080/09540962.2011.545532.
- *Ostrom, E. 1996. "Crossing the Great Divide: Co-Production, Synergy, and Development." *World Development* 24 (6): 1073–1087. doi:10.1016/0305-750X(96)00023-X.
- Pawson, R. 2006. *Evidence-Based Policy: A Realist Perspective*. London: Sage.
- *Pestoff, V. 2006. "Citizens and Co-Production of Welfare Services. Childcare in Eight European Countries." *Public Management Review* 8 (4): 503–519. doi:10.1080/14719030601022882.
- *Pestoff, V. 2009. "Towards a Paradigm of Democratic Participation: Citizen Participation and Co-Production of Personal Social Services in Sweden." *Annals of Public and Cooperative Economics* 80 (2): 197–224. doi:10.1111/j.1467-8292.2009.00384.x.
- Pollitt, C., and P. Hupe. 2011. "Talking about Government: The Role of Magic Concepts." *Public Management Review* 13 (5): 641–658. doi:10.1080/14719037.2010.532963.
- Prahalad, C. K., and V. Ramaswamy. 2000. "Co-Opting Customer Competence." *Harvard Business Review* 78 (1): 79–90.
- *Roberts, A., S. Townsend, J. Morris, E. Rushbrooke, B. Greenhill, R. Whitehead, T. Matthews, and L. Golding. 2013. "Treat Me Right, Treat Me Equal: Using National Policy and Legislation to Create Positive Changes in Local Health Services for People with Intellectual Disabilities." *Journal of Applied Research in Intellectual Disabilities* 26 (1): 14–25. doi:10.1111/jar.12009.
- *Rossi, U. 2004. "The Multiplex City: The Process of Urban Change in the Historic Centre of Naples." *European Urban and Regional Studies* 11 (2): 156–169. doi:10.1177/0969776404041421.
- *Ryan, B. 2012. "Co-Production: Option or Obligation?" *Australian Journal of Public Administration* 71 (3): 314–324. doi:10.1111/j.1467-8500.2012.00780.x.
- Salge, T., and A. Vera. 2012. "Benefiting from Public Sector Innovation: The Moderating Role of Customer and Learning Orientation." *Public Administration Review* 72 (4): 550–559. doi:10.1111/j.1540-6210.2012.02529.x.
- *Schafft, K. A., and D. L. Brown. 2000. "Social Capital and Grassroots Development: The Case of Roma Self-Governance in Hungary." *Social Problems* 47 (2): 201–219. doi:10.2307/3097198.
- Sorensen, E., and J. Torfing. 2011. "Enhancing Collaborative Innovation in the Public Sector." *Administration & Society* 43 (8): 842–868. doi:10.1177/0095399711418768.

- *Sundeen, R. 1988. "Explaining Participation in Co-Production – A Study of Volunteers." *Social Science Quarterly* 69 (3): 547–568.
- *Talsma, L., and J. F. M. Molenbroek. 2012. "User-Centered Co-Tourism Development." *Work-A Journal of Prevention Assessment & Rehabilitation* 41: 2147–2154.
- *Vamstad, J. 2012. "Co-Production and Service Quality: The Case of Cooperative Childcare in Sweden." *Voluntas* 23 (4): 1173–1188. doi:10.1007/s11266-012-9312-y.
- *Van de Ven, A. H., R. W. Rogers, J. P. Bechara, and K. Sun. 2008. "Organizational Diversity, Integration and Performance." *Journal of Organizational Behavior* 29 (3): 335–354. doi:10.1002/job.511.
- Vargo, S., and R. Lusch. 2004. "Evolving to a New Dominant Logic for Marketing." *Journal of Marketing* 68 (1): 1–17. doi:10.1509/jmkg.68.1.1.24036.
- *Verschuere, B., T. Brandsen, and V. Pestoff. 2012. "Co-Production: The State of the Art in Research and the Future Agenda." *Voluntas* 23 (4): 1083–1101. doi:10.1007/s11266-012-9307-8.
- Von Hippel, E. 1987. "Cooperation between Rivals: Informal Know-How Trading." *Research Policy* 16 (6): 291–302. doi:10.1016/0048-7333(87)90015-1.
- Von Hippel, E. 2007. "Horizontal Innovation Networks – by and for Users." *Industrial and Corporate Change* 2 (1): 1–23.
- *Weaver, B. 2011. "Co-Producing Community Justice: The Transformative Potential of Personalisation for Penal Sanctions." *British Journal of Social Work* 41 (6): 1038–1057. doi:10.1093/bjsw/bcr011.
- Weick, K. 1969. *The Social Psychology of Organizing*. Reading, MA: Addison-Wesley.
- Weick, K. 1995. *Sensemaking in Organizations*. Thousand Oaks, CA: Sage.
- *Weinberger, K., and J. P. Jütting. 2001. "Women's Participation in Local Organizations: Conditions and Constraints." *World Development* 29 (8): 1391–1404. doi:10.1016/S0305-750X(01)00049-3.
- Wilson, S. J., M. W. Lipsey, and J. H. Derzon. 2003. "The Effects of School-Based Intervention Programs on Aggressive Behavior: A Meta-Analysis." *Journal of Consulting and Clinical Psychology* 71 (1): 136–149. doi:10.1037/0022-006X.71.1.136.
- *Wipf, E., F. Ohl, and M. Groeneveld. 2009. "Managing Natural Locations for Outdoor Recreation." *Public Management Review* 11 (4): 515–537. doi:10.1080/14719030902989599.
- *Wise, S., R. A. Paton, and T. Gegenhuber. 2012. "Value Co-Creation through Collective Intelligence in the Public Sector: A Review of US and European Initiatives." *Vine* 42 (2): 251–276. doi:10.1108/03055721211227273.

Appendix 1**PRISMA checklist**

<i>Section/topic</i>	<i>Number</i>	<i>Checklist item</i>	<i>Reported on page number</i>
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3–5
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes and study design (PICOS).	4
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g. Web address), and, if available, provide registration information including registration number.	4
Eligibility criteria	6	Specify study characteristics (e.g. PICOS, length of follow-up) and report characteristics (e.g. years considered, language, publication status) used as criteria for eligibility, giving rationale.	6–8
Information sources	7	Describe all information sources (e.g. databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	7
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	8

(continued)

Appendix 1: (Continued)

<i>Section/topic</i>	<i>Number</i>	<i>Checklist item</i>	<i>Reported on page number</i>
Study selection	9	State the process for selecting studies (i.e. screening, eligibility, included in systematic review and, if applicable, included in the meta-analysis).	8
Data collection process	10	Describe method of data extraction from reports (e.g. piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	7–8
Data items	11	List and define all variables for which data were sought (e.g. PICOS, funding sources) and any assumptions and simplifications made.	NA
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	NA
Summary measures	13	State the principal summary measures (e.g. risk ratio, difference in means).	NA
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g. I^2) for each meta-analysis.	NA
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g. publication bias, selective reporting within studies).	6–8
Additional analyses	16	Describe methods of additional analyses (e.g. sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	6–8
RESULTS			
Study selection	17	Give the numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	8
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g. study size, PICOS, follow-up period) and provide the citations.	9
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	NA

(continued)

Appendix 1: (Continued)

<i>Section/topic</i>	<i>Number</i>	<i>Checklist item</i>	<i>Reported on page number</i>
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group, (b) effect estimates and confidence intervals, ideally with a forest plot.	NA
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	NA
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	NA
Additional analysis	23	Give the results of additional analyses, if done (e.g. sensitivity or subgroup analyses, meta-regression [see Item 16]).	9–17
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g. health care providers, users and policy makers).	18
Limitations	25	Discuss the limitations at study and outcome level (e.g. risk of bias) and at review level (e.g. incomplete retrieval of identified research, reporting bias).	18
Conclusions	26	Provide a general interpretation of the results in the context of other evidence and implications for future research.	21–23
FUNDING			
Funding	27	Describe the sources of funding for the systematic review and other support (e.g. supply of data); role of funders for the systematic review.	NA

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement." *PLoS Med* 6 (6): e1000097. doi:10.1371/journal.pmed1000097. For more information, visit <http://www.prisma-statement.org>