

Activating collective co-production for public services: influencing citizens to participate in complex governance mechanisms

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Abstract

Previous research has suggested that citizen co-production of public services is more likely when actions involved are easy and can be carried out individually rather than in groups. This paper explores whether this holds in local areas of England and Wales. It asks which people are most likely to engage in individual and collective co-production and how people can be influenced to extend their co-production efforts by participating in more collective activities. Data was collected in five areas, using citizen panels organised by local authorities. The findings demonstrate that individual and collective co-production have rather different characteristics and correlates and highlight the importance of distinguishing between them for policy purposes. In particular, collective co-production is likely to be high in relation to any given issue when citizens have a strong sense that people can make a difference ('political self-efficacy'). 'Nudges' to encourage increased co-production had only a weak effect.

Points for practitioners

Much of the potential pay-off from co-production is likely to arise from group-based activities, so activating citizens to move from individual to collective co-production may be an important issue for policy. This paper shows that there is major scope for activating more collective co-production, since the level of collective co-production in which people engage is not strongly predicted by their background and can be influenced by public policy variables. 'Nudges' may help to encourage more collective co-production but they may need to be quite strong to succeed.

Key words

citizen activation; community co-production; co-production correlates; individual co-production; influence strategies; nudge

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Introduction

When the co-production of public services by service users first became an important topic in the late 1970s in the private sector (Zeleny, 1978; Lovelock and Young, 1979), it was largely considered as an individual phenomenon. However, when interest in co-production spread to the public sector in the early 1980s (Whitaker, 1980; Sharp, 1980; Parks *et al.*, 1981; Brudney and England, 1983; Percy, 1984), the literature quickly demonstrated that not only had user and community co-production long been widely practised, e.g. in citizen militias, jury systems, workers' education associations, volunteer fire fighters, etc. but that co-production was often a collective phenomenon, undertaken in groups and communities, and not simply as an individual practice. Soon there was wide acceptance for the idea that services generally require important inputs from both professionals and service users to be fully effective (Normann, 1984; Ramirez, 1996) but for twenty years this insight did not change the fixation on the role of the public sector in performing public services and achieving publicly-desired outcomes.

However, a second wave of interest in user and community co-production was triggered in recent years by the recognition that publicly-desirable outcomes are likely to rely quite heavily on the contributions of multiple stakeholders, amongst whom users and the communities in which they live are centrally important. Consequently, co-production has come back into vogue both theoretically (Ostrom 1996; Alford 2002, 2009; Bovaird and Loeffler 2012; Pestoff 2012; Osborne et al 2013; Durose et al 2013) and in revealing case studies (Ostrom 1996; Alford 2009; Bovaird 2007; Needham and Carr, 2009; Loeffler et al, 2012; Jones, 2013). Moreover, extra salience has been given to the potential of co-production in light of the fiscal pressures facing many governments since 2008 (OECD, 2011) and co-production is now a topic in public management in a large number of countries (Pestoff et al, 2012).

In spite of this growing interest, there has been little quantitative empirical research on citizen co-production behaviours, at either national or local government levels. Two of the authors therefore helped the EU Presidency to co-design a large-sample survey in the UK, France, Germany, Denmark and the Czech Republic and have reported from this unique data set on overall co-production behaviours and attitudes (Loeffler et al, 2008) and on how the behaviour and attitudes of citizens towards individual co-production activities correlate with citizen characteristics (Parrado et al, 2013). One major finding which emerged from this research was the apparent difference in the nature and level of collective co-production compared to individual co-production. It appeared that citizens were more likely to engage in co-production of public services and social outcomes with public agencies when the actions involved were relatively easy and could be carried out individually rather than in groups (Loeffler et al, 2008; Parrado et al., 2013). Since much of the potential pay-off from co-production, both to the public sector and to citizens, is likely to come from collective activities rather than individual action (Pestoff, 2012), this could reduce the value of co-production approaches to public services.

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The research reported here was designed to explore in more depth the level of collective co-production in the UK, the variables which influence how it varies across people and whether specific public policy initiatives might influence individuals to extend their co-production activities into collective action, participating in more complex governance activities.

This paper reports the results from the study, confirming that the level of individual co-production is substantially higher than collective co-production in four quite different areas of public outcomes. It demonstrates that the correlates of collective co-production are quite different from those of individual co-production. It suggests that both individual and collective co-production tend to be higher in relation to any given issue when it is strongly believed that people can make a difference ('political self-efficacy'). It shows that 'Nudges' towards collective co-productive may have some, albeit rather unreliable, effect. The paper concludes with some policy recommendations from these findings, and recommendations for future research into the difference between individual and collective co-production.

Individual and collective co-production

Based on the seminal work by Ostrom and Ostrom (1977), early definitions of co-production typically referred to the contribution of resources by service users and providers to raising the quantity and/or quality of provision of a good or service, or in some cases their contribution to ensuring that the service was provided at all (Brudney, 1983). For the research in this paper, we have used a more recent variant of this definition by *Governance International*: co-production is about "*professionals and citizens making better use of each other's assets, resources and contributions to achieve better outcomes or improved efficiency*" (www.govint.org, accessed on 16 July 2014).

A key advantage of this definition is that it allows us to distinguish what is and what is not 'co-production'. Unless BOTH citizens AND professionals make a significant contribution, we do not consider the activity to be 'co-produced'. Consequently, purely 'self-help' by people who use services and purely 'self-organising' by communities do not qualify as co-production under this definition. Moreover, consultation exercises only qualify as 'co-production' if the contribution of citizens is significant – as would not be the case, for example, if the consultation was only to pass on information to citizens rather than allowing them to influence decisions.

This definition is also valuable in emphasising the interactive nature of co-production – stakeholders making better use of each other's resources – and thus the potential for collective action in co-production. While for some authors (Ostrom 1996; Ramírez 1999) co-production is seen in terms primarily of individual action, for others (Joshi and Moore, 2004), it implies long-term relationships (institutionalized arrangements) between state agencies and organized groups of citizens.

In the literature, two distinct sets of criteria can be found to categorise individual and collective co-production – a) whether the outputs are collectively enjoyed and b) whether the inputs are collectively supplied. In practice, of course, many co-production activities may be provided both by individuals and

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in collective entities and their benefits may be enjoyed both by those directly involved and by wider groups, yielding hybrid categories.

Brudney and England (1983: 63-64), early contributors to this debate, distinguish between individual, group and collective co-production:

- *Individual co-production* – either ‘captured co-production’, where citizens have little choice but to participate in the service as provided ‘top-down’ (e.g. social services clients receiving counseling support) or active, voluntary behaviors that citizens undertake for their own consumption (e.g. turning in faulty fire alarms). Here, both the contributions made and the benefits received by citizens are at an individual level.
- *Group co-production* – voluntary, active participation by a number of citizens, perhaps with formal coordination mechanisms between service agents and citizen groups (e.g. neighbourhood associations where individuals join in to improve the quantity/quality of services consumed). Here the inputs by citizens are collective but the benefits are largely individually experienced.
- *Collective co-production* – where co-productive activities result in collective goods whose benefits may be enjoyed by the entire community. Here, the benefits are collective but the inputs by citizens may be provided individually or together.

In his influential analysis of the role of citizens in interacting with government, Alford (2002) distinguishes between co-production undertaken by users-clients, volunteers, and members of a community. These categories correspond quite closely to those of Brudney and England, except that he suggests that citizens acting as ‘members of a community’ are generally not actively engaged in the provision of public goods or services for anyone, but are engaging in wider activities (such as influencing policy or holding politicians to account for their decisions and behaviours) which are generally intended to benefit others (often including themselves).

In line with the definition of co-production given above, our research has focused on the contributions (‘inputs’) made by citizens as co-producers. We therefore define *collective co-production* as the *joint* action of citizens to support public services and achieve outcomes, while individual co-production covers those actions not jointly undertaken. Consequently, we treat both the ‘group’ and ‘collective’ categories identified by Brudney and England (and the corresponding categories of Alford) as forms of ‘collective co-production’, since both involve citizens working together to co-produce outcomes and wellbeing. Collective co-production can arise from either individual self-interest (e.g. of service clients, volunteers or other involved citizens) or out of less selfish motives to achieve benefits experienced collectively. However, in future research we hope to explore the differences in the behaviours of those who undertake collective co-production essentially for their own purposes and those who seek to achieve more collective benefits.

The importance of collective co-production for public policy is that it has potential to magnify and accelerate the value added by the contributions of individuals. As Pestoff (2012: 28) argues: “Collective action and, even more, collective interaction have the ability to transform the pursuit of self-interest

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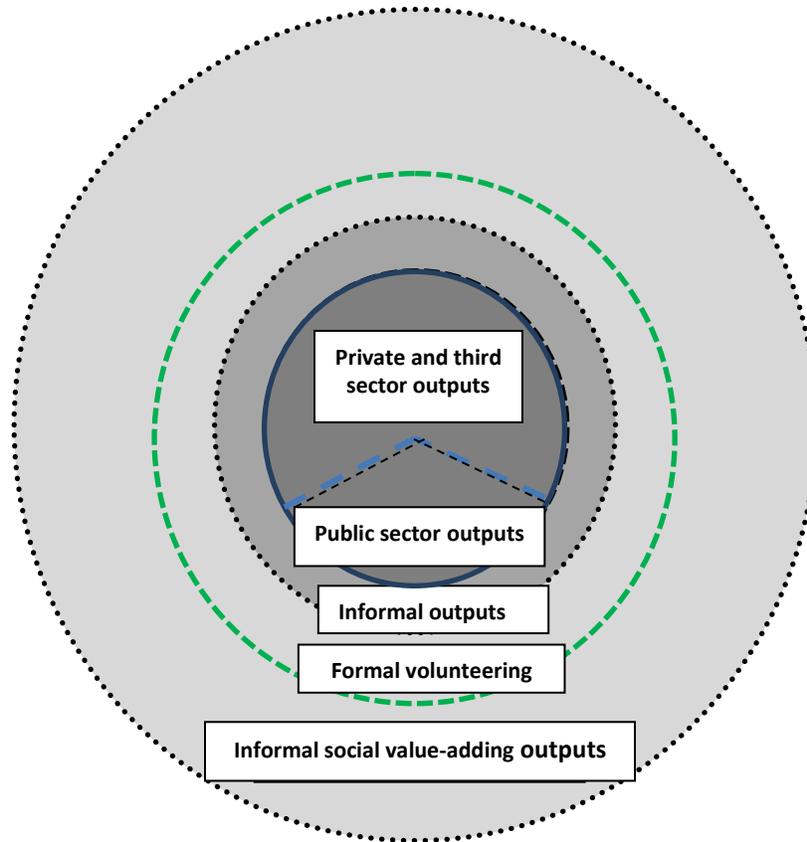
into something more than the sum of individual self-interest”, particularly promoting “the development of social capital, mutualism and reciprocity” (p. 30).

Moreover, collective co-production can potentially take the form and achieve the momentum of a social movement. Barnes (2009: 232) concludes her analysis of the role of citizens as consumers: “Collectively, service users have developed alternative ways of understanding disability, mental illness and caregiving, have claimed the right to construct their own identities and have unsettled taken-for-granted assumptions about social relations, not only between providers and users of welfare services at the point of delivery but also in the process of deliberation about social policies”. These are powerful achievements which only collective action can trigger. Even where users do not form a social movement, but where their closely-connected interactions give rise to a complex adaptive system, it is likely that the outcomes which they can jointly achieve can be significantly enhanced through collective action (Bovaird, 2007).

Collective co-production therefore both makes use of existing social capital to allow valuable outcomes to be achieved and, in turn, provides activities through which further social capital can be built, in the different ways which Pestoff and Barnes have suggested. The relationship between co-production and social capital is illustrated in Figure 1. Transactions which involve money exchanges sit in the centre of the figure, and together make up GDP, including the turnover of all private and third sector organisations, and the costs of the public sector. However, much of the value-adding activity in our society is not captured by GDP. The contribution of formal volunteering and informal social activities (the outer rings) to the overall value added in society has not been precisely measured but is likely to be very considerable. Moreover, the linkages between the monetised economy (in the centre) and civic society (in the outer rings) are likely to be highly important – people can add more value to each other’s lives in civic society if they get jobs, income, skills, transport, etc. from the monetised economy, allowing them to spend money doing family and social activities together. Similarly, organisations in the monetised economy (in all sectors) are likely to be much more productive if their service users (and staff) have rewarding personal and social relationships in civic society, which build their self-esteem and confidence, enabling and motivating them to make their full potential contribution to service processes.

Many of these contributions by service users are in the form of individual co-production (and may well be measurable in the monetised economy, e.g. through the improved efficiency or effectiveness of the service organisations). However, the interface between the outer rings and public sector outputs in the inner ring also includes community co-production of public services and outcomes. Here, volunteering occurs, e.g. through groups of StreetWatch residents patrolling their neighbourhoods at night, groups of parents running breakfast clubs for schoolchildren or clubs using public sports centres to raise the fitness and sociability of young people. Perhaps more importantly, this interface is also where informal social value-adding activities in civic societies can improve public service outcomes, e.g. through publicly-supported peer networks which discourage drug use; or befriending schemes for local people who are housebound or isolated; or local initiatives to encourage neighbours to keep an eye out for possible incidents of child abuse or domestic violence, etc. Some social movements involving service users also operate at this interface, as Barnes (2009: 232) suggests.

Figure 1 Economic and social value-adding outputs in society



As examples of how important collective co-production is to the creation of public value, in the UK there are about 350,000 school governors, who serve on committees to help run schools; about 5.6m people help to run sports clubs; 750,000 people volunteer to assist teachers in schools; 170,000 volunteer in the NHS, befriending and counselling patients, driving people to hospital, fund raising, running shops and cafes, etc. In 2008, there were over 109 active time banks across the UK, in which 600,000 hours of time have been mutually exchanged (Ryan-Collins, Stephens and Coote, 2008). However, with the exception of in-family health and social care activities, and those involved in running sports clubs, the numbers of people involved in these 'collective' activities can be seen as rather small, compared to the 'individual' co-production efforts of 1.8m regular blood donors or 8m people signed up as organ donors, and 10m people who keep an eye on potential crime and anti-social behaviour within Neighbourhood Watch schemes, all of which are more 'lonely' activities, but which are also easier to fit into a person's daily timetable (although, of course, they may also have a 'group' dimension, e.g. attendance at occasional Neighbourhood Watch meetings in the locality). However, there has been little systematic empirical

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research into the level of collective co-production or its drivers, a gap which this research has attempted to address.

Research hypotheses

In previous research (Loeffler et al., 2008; Parrado et al., 2013) we set out hypotheses about the level of co-production and the drivers of co-production which we expected. Given the lack of previous empirical research on co-production, these hypotheses were mainly extrapolated from results in the literature relating to service user and community participation and engagement with the public sector, rather than research on co-production as such. From this literature we hypothesised that co-production would be influenced by:

- *conditions*: the perception of citizens as to whether there was a serious problem which needed to be tackled;
- *public performance*: the perception of citizens of how good a job the public sector is doing in tackling this problem;
- *public involvement initiatives*: the perception of citizens of how well the public sector is involving them in tackling the problem or improving the service;
- *'self-efficacy'*: the perception of citizens of whether 'people can make a difference' by becoming involved in a service or issue;
- *personal characteristics*: age, gender, educational level, location, ethnic background.

These hypotheses about the overall level of co-production were generally borne out in previous research (Loeffler et al. 2008; Parrado et al. 2013). In going further, to build a model to explain the ways in which collective co-production differs from individual co-production, we hypothesise that these same categories of variables are likely to affect both types of co-production, but to different degrees.

The previous research study was based on a survey of about 5000 citizens across five EU countries and suggested strongly that, although co-production in general is quite high, only a small minority of citizens wish to get engaged in some form of collective co-production activity on a regular basis. In the current study, our hypothesis on the relative levels of individual and collection co-production is therefore that individual co-production will be significantly higher in volume than collective co-production.

Methodology

A citizen survey was conducted in five study areas, exploring the level and correlates of individual and collective co-production. The areas were chosen to reflect five quite different types of local authority area in England and Wales: a London Borough (Barnet), a metropolitan city (Wolverhampton), a large free-standing city (Bristol), a medium-sized free-standing city (Swansea) and a rural area (Derbyshire Dales). Further details are given in Table 1. A condition for selecting the area was that it had to have a

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representative citizens' panel, to which the survey questionnaire could be sent. This criterion ensured a substantial response, while keeping the survey costs quite low. Response levels naturally varied with the size of the citizen panels. In addition, some councils were more successful than others in achieving good response rates. The final numbers achieved were: Barnet - 430; Bristol City Council - 953; Derbyshire Dales - 496; Swansea - 706; Wolverhampton – 547.

Table 1. Characteristics of the study areas.

Area, (local authority)	Country	Population	Characteristics
Barnet (London Borough of Barnet)	England	357,500 (2011)	Outer London borough, unitary local authority (i.e. it has most local government functions), Conservative Party controlled Council (but with strong Labour party representation).
Bristol (Bristol City Council)	England	437,500 (2013)	Large freestanding city, unitary local authority, traditionally the administrative centre for the South West region of England, reputation as 'Green' city, currently Labour Party controlled Council (but recently also under Liberal Democrat control).
Derbyshire Dales (Derbyshire Dales District Council)	England	71,100 (2011)	Lower tier council (one of the district councils within Derbyshire County Council), mainly rural area, largely within the touristic Peak District, strong Conservative Party control of the Council.
Swansea (City and County of Swansea Council)	Wales	239,000 (2011)	Freestanding city with touristic coastline and hinterland, unitary local authority, currently Labour Party controlled (but with recent history of Liberal Democrats leading minority administration).
Wolverhampton (Wolverhampton City Council)	England	249,900 (2011)	Unitary metropolitan borough council within West Midlands conurbation, currently Labour Party controlled, strongly oriented to manufacturing

As previous research has shown that co-production activity varies widely between service areas and issues, the research focused in-depth on the following themes:

- Local environmental improvement
- Community safety
- Social wellbeing
- Health

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The choice of themes was made by the local authority, to reflect their current policy priorities. One chose three themes (Derbyshire Dales District Council), most chose two themes (LB of Barnet, Bristol City Council, Wolverhampton City Council) and one chose just one theme (Swansea Council).

The core survey questions were common between the five areas but some variation in the questionnaire was agreed with the five authorities to reflect local priorities. The central questions in the survey focused on the level of respondent's participation in a range of co-production activities identified under each of the themes. These were partly derived from the literature, partly from previous research by the authors, and partly in discussion with relevant services in each local authority area. In addition, questions probed the potential drivers, as outline in the methodology section above, covering local conditions in relation to each theme, public performance, public involvement initiatives, self-efficacy and personal characteristics.

We developed an *index of individual co-production* for each respondent in relation to each of the four themes; in each theme we calculated the proportion of questions about individual co-production activities to which respondents gave a positive response (i.e. they participated in that activity 'often' or 'sometimes'). We used as our *index of collective co-production* their propensity to join in groups with others ('often' or 'sometimes') to pursue improvements to that theme.

Finally, the project incorporated experimental methods to explore intervention strategies ('Nudges') which might influence citizens and groups towards collective co-production behaviours. This approach was designed to allow researchers to identify which types of influence strategy are most likely to be cost-effective in achieving behaviour change towards collective co-production (John et al. 2009; Stoker and Moseley, 2010). The Nudges were devised to be likely to be relevant to each of the three participating local authority areas (as two of the five areas did not wish to test the Nudges) and to be capable of plausible adaptation to each of the four themes. The research tested out the extent to which these 'Nudges' affected responses on individual and collective co-production activities. Two Nudges were used – one consisted of a short introduction briefing to that theme in the questionnaire which emphasised that many other local people were already taking part in similar activities; the second that such participation was typically easy and did not take up much time. Some respondents received both Nudges, some received one or the other Nudge, and some received no Nudges.

Findings

Here we report the findings from the analysis of the surveys, focusing only on statistically significant findings, unless otherwise stated.

Levels of individual co-production

The value of the index of individual co-production (see Table 2) varied widely, from as low as 40% (wellbeing in Barnet) to 68% (environment in Swansea). Where pair-wise comparisons could be made, individual co-production was substantially higher in environment than in community safety. In the two

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cases of health and wellbeing, the level of co-production was at the lower end of the scale, even below community safety. There was also a significant locational pattern - the levels of individual co-production in the two metropolitan areas (Wolverhampton Metropolitan Borough Council and the London Borough of Barnet) were significantly lower than in the free standing cities of Bristol and Swansea and the rural area of Derbyshire Dales.

Levels of collective co-production

Again, the value of this index varied widely, from as low as 13% (community safety and wellbeing in Barnet) to as high 90% (environment in Bristol). Again there was a significant locational pattern, with the levels of collective co-production in the two metropolitan areas being significantly lower than in the free standing cities and the rural area.

It is clear, however, that individual co-production is virtually always at a much higher level than collective co-production, as we hypothesised. Moreover, this applies in each of the four themes.

The sole exception to this clear tendency for collective co-production to be lower than individual co-production is in relation to the environment theme in Bristol, where 90% said they took part in collective co-production, whereas on average only 68% (still remarkably high, of course) gave a positive response to the individual co-production activities. Even more remarkably, 72% of respondents said that they participated in a group 'often', with the remaining 18% saying 'sometimes'. While Bristol does have a reputation in the UK as being an outstandingly 'green' city, both in terms of its public policies and the number and intensity of 'green' third sector organisations, these figures were unexpectedly high.

Table 2. Levels of individual and collective co-production

	<i>Index of individual co-production (%)</i>	<i>Collective co-production – participation in groups (%)</i>	<i>Willing to spend at least a few hrs a month (%)</i>
BARNET			
community safety	44	13	-
wellbeing	40	13	-
BRISTOL			
environment	67	90	44
community safety	57	28	36
DERBYSHIRE DATES			
environment	55	32	32
community safety	49	30	27
health	46	16	23
SWANSEA			
environment	68	36	52

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WOLVERHAMPTON			
environment	52	22	32
community safety	44	25	34

Willingness to spend time in co-production

We asked how much time respondents were prepared to devote to working with others in various co-production activities (so this is also an aspect of collective co-production). The proportion of respondents prepared to spend at least a few hours a month varied widely (see Table 2), from as low as 23% (Derbyshire Dales, health) to 52% (Swansea, environment).

In the case of the LB of Barnet, we asked two slightly different questions about time spent in co-production in relation to community safety and social wellbeing. First, we asked “About how much time do you currently spend ... [in relation to each of the two themes]”. Only 8% said they spent at least a few hours every month on co-production activities in community safety but 58% gave this response for co-production activities in relation to social wellbeing. We also asked “About how much MORE time are you willing to spend ...[in relation to each of the two themes]”. Here, 20% responded that they were willing to spend at least a few hours a month more on co-production in relation to community safety, in contrast to the 8% already spending this amount of time per month. On the other hand, only 43% responded that they were willing to spend at least a few more hours a month in co-production in relation to social wellbeing, compared to the 58% already spending this amount of time per month. This suggests that there is likely to be a ‘peaking’ phenomenon in co-production - where only a little is taking place, there may be an unfulfilled demand to do more; but where a lot is taking place, there is rather less demand for more such activity. However, it is still remarkable that levels of co-production activity in social wellbeing in Barnet are so high and that there is still substantial willingness to do more.

Correlates of individual co-production:

As can be seen in Table 3, between our five authorities and several themes, we have ten potential sets of relationships between co-production and other variables, each of which has been analysed separately. (Note: In Tables 3 and 4 the statistical correlations have been calculated ignoring those who answered ‘Don’t Know’ to the questions).

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Table 3. Correlates of individual co-production

	<i>Barnet Comm Safety</i>	<i>Barnet Wellbeing</i>	<i>Bristol Env</i>	<i>Bristol Comm Safety</i>	<i>Derbyshire Dales Env</i>	<i>Derbyshire Dales Comm Safety</i>	<i>Derbyshire Dales Health</i>	<i>Swansea Env</i>	<i>Wolv' hampton Env</i>	<i>Wolv' hampton Comm Safety</i>
Conditions	0.162**	-	-0.062	-0.082*	0.030	-0.059	-0.020	-0.098**	-0.042	-0.059
Satisfaction with public service response	Crime: 0.16** ASB: 0.168**	-	-0.060	-0.020	-0.016*	0.021	0.019	-0.046	-0.079	-0.193**
Satisfaction with information	Crime 0.029 ASB 0.061	-	0.032	0.117**	0.012	0.138**	Own health: 0.090 Health of others: 0.138**	-0.064	-0.081	-0.251**
Satisfaction with consultation	Crime: 0.054 ASB: 0.066	-	0.020	0.107**	0.184**	0.246**	Own health: 0.163** Health of others: 0.201**	-0.089*	-0.096*	-0.156**
Citizens make a difference?	Crime: 0.168** ASB: 0.139**	Ordinary citizens: 0.044 People needing help: 0.093 Public agencies: 0.068	0.144**	0.134**	0.176**	0.105*	Own health 0.115* Health of others 0.134**	0.045	-0.108*	0.025
Gender	-0.050	-0.067	-	-	-0.087	-0.124**	-0.003	-	0.021	0.1*
Age	0.025	0.046	-	-	-0.175**	-0.051	-0.096*	-	-0.33**	-0.24**
Ethnicity	-0.041	-0.044	-	-	-	-	-	-	0.061	-0.013

Note: ** statistically significant at 1% level

* statistically significant at 5% level

Bold - significant POSITIVE correlation

Light grey shading – significant NEGATIVE correlation

The most frequently significant variables associated with the index of individual co-production were:

- attitude to 'self-efficacy' (can people make a difference in tackling the problems) – strong positive association in 6 out of 10 cases (but also negative in 1 case out of 10)
- attitude to government interaction – strong positive association in relation to 'satisfaction with government information on the issue' in three out of 10 cases (but also negative in one case); strong positive association in relation to 'satisfaction with consultation on the issue' in four out of 10 cases (but also negative in three cases)
- attitude to performance of government - strong negative association in relation to 'satisfaction with government response to issue' in 2 areas out of 10, also strong positive association in 1 area out of 10

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- attitude to level of 'conditions' (level of safety, environment, health, wellbeing) – strong negative associations in 2 areas out of 10 (worse local conditions mean higher individual co-production); strong positive association in one area out of 10
- socio-demographic variables – strong negative association between individual co-production and age in four out of 10 cases, only two significant associations with gender (one positive for males, one negative), no significant association in the 4 cases where we can test for ethnic background.

Correlates of collective co-production:

As shown in Table 4, the most frequently significant variables associated with collective co-production were:

- attitude to 'self-efficacy' (can people make a difference in tackling the problems) – strong positive association in eight out of ten cases (but also negative in one case out of ten)
- attitude to performance of government - strong positive association in relation to 'satisfaction with government response to issue' in three areas out of ten, also strong negative association in two areas out of ten (in Wolverhampton)
- attitude to government interaction – strong positive association in relation to 'satisfaction with government information on the issue' in two out of ten cases; strong positive association in relation to 'satisfaction with consultation on the issue' in two out of ten cases (but also negative in two cases in Wolverhampton)
- attitude to level of 'conditions' (safety, environment, health, wellbeing) – significant negative association with perceived level of conditions in relation to the variable in three cases out of ten
- socio-demographic variables – one positive and one negative association between individual co-production and age out of ten cases, only one significant association with gender (positive for males), no significant association in the four cases where we can test for ethnic background.

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Table 4. Correlates of collective co-production

	<i>Barnet Comm</i> <i>Safety</i>	<i>Barnet</i> <i>Well-being</i>	<i>Bristol</i> <i>Env</i>	<i>Bristol</i> <i>Comm Safety</i>	<i>Derbyshire Dales</i> <i>Env</i>	<i>Derbyshire Dales</i> <i>Comm Safety</i>	<i>Derbyshire Dales</i> <i>Health</i>	<i>Swansea</i> <i>Env</i>	<i>Wolv' hampton</i> <i>Env</i>	<i>Wolv' hampton</i> <i>Comm Safety</i>
Conditions	-0.130	-	-0.10**	0.004	0.060	-0.064	0.052	-0.056**	-0.195**	-0.65
Satisfaction with public service response	Crime: -0.044 ASB: -0.052	-	0.121**	Crime & ASB: 0.014	0.034	0.178*	0.178*	0.037	-0.171**	-0.185**
Satisfaction with information	Crime: -0.065 ASB: -0.006	-	-0.072	0.108***	0.061	0.296**	Own health: 0.028 Health of others: 0.031	-0.048	-0.118	-0.091
Satisfaction with consultation	Crime: -0.010 ASB: 0.032	-	0.008	0.138**	0.090	0.300**	Own health: 0.058 Health of others: 0.046	-0.073	-0.027*	-0.040*
Citizens make a difference?	Crime: 0.348** ASB: 0.327**	Ordinary citizens: -0.065 Public agencies 0.114*	0.220*	0.263**	0.30	0.768**	Own health: -0.007 Health of others: -0.058*	0.227**	0.112*	0.292**
Gender	-0.056	-0.087	-	-	0.009	0.038	-0.005	-	-0.091**	-0.011
Age	0.079	0.250**	-	-	0.035	0.076	-0.061	-	0.00	-0.250**
Ethnicity	-0.106	-0.032	-	-	-	-	-	-	0.086	0.29

Note: ** statistically significant at 1% level

* statistically significant at 5% level

Bold - significant POSITIVE correlation

Light grey shading – significant NEGATIVE correlation

Effect of the 'Nudges'

In three of the five sites, the research tested out the extent to which 'Nudges' given to the respondents affected their responses on collective co-production. The two Nudges were agreed in advance with the three local authorities and were phrased to be relevant to the local situation. They were:

- Nudge A: making respondents aware of successful co-production activities in theme concerned (community safety, local environmental improvement, social wellbeing) by individuals or groups in their neighbourhood.
- Nudge B: making respondents aware of how much time on average individuals (acting alone or in groups) typically devote to co-production activities in respect of the theme concerned.

This procedure means that there were four groups of respondents, namely those who received Nudges A and B; Nudge A only; Nudge B only; or no Nudge. Respondents were randomly assigned to these focus groups. This approach was designed to allow researchers to identify which types of influence strategy

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are most likely to be cost-effective in achieving behaviour change towards collective co-production. However, in practice, only some of the Nudges had a significant association with the level of coproduction when included in the regression analyses. As shown in Table 5, Nudge A was significantly positive in Bristol in relation to both individual and collective co-production in local environmental improvement and, much more weakly, in relation to individual co-production in community safety. In Barnet, Nudge A was significantly positive in relation to collective co-production only, for both crime and anti-social behaviour. In Barnet, when both Nudges were given together, they had a significant positive association with collective co-production, both in the case of anti-social behaviour and crime (though this was weak in the case of crime and, for anti-social behaviour, it was partly due to a weak positive effect from Nudge B as well). In all other cases, including for all cases in Wolverhampton, there was no significant association between the Nudges and the level of co-production. It is interesting, but cannot be regarded as conclusive, that six out of the eight instances where 'Nudges' were statistically significant (out of thirty cases overall) occurred in relation to collective co-production.

Table 5. Associations of Nudges with level of co-production (regression coefficient)

Local authority	Themes		Individual co-production	Collective co-production
Barnet	Crime	Nudge A	2.7	6.4***
		Nudge B	2.7	4.3
		Both Nudges	2.7	5.6*
	Anti-social behaviour	Nudge A	2.1	7.6**
		Nudge B	1.7	5.5*
		Both Nudges	3.1	6.7**
Bristol	Environment	Nudge A	2.9***	4.0**
		Nudge B	0.3	-0.6
		Both Nudges	1.1	1.3
	Community safety	Nudge A	1.2*	3.2
		Nudge B	0.1	-0.6
		Both Nudges	0.2	-0.2
Wolverhampton	Environment	Nudge A	-3.4	3.1
		Nudge B1	-3.5	2.4
		Both Nudges	0.3	-1.9
	Community safety	Nudge A	0.4	-2.6
		Nudge B	-1.8	-3.6
		Both Nudges	2.5	1.0

Note: ** statistically significant at 1% level

* statistically significant at 5% level

Bold - significant POSITIVE correlation

In all cases, the Nudges are compared with the 'No Nudge' case.

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It therefore seemed that our very low cost information-based Nudges generally had only a weak capacity to make a difference to coproduction effort, although they clearly had more effect in encouraging collective co-production responses than individual co-production. Nudge strategies can prove effective in moving citizens from no engagement to engagement (for examples see John et al, 2011) but from our evidence it would appear that slightly stronger, more sustained, Nudges might be necessary to get a reliable effect. The Nudges that we tried were modest and their impact dampened by other measurable factors driving co-production activities. Nudge strategies as stand-alone measures would appear to have only a limited hope of successes but our evidence does suggest that they remain for policy makers a potential “add-on” they should consider in developing their policies for co-production, perhaps especially of a more collective character .

Conclusions and policy recommendations

This study has demonstrated that individual and collective co-production have rather different characteristics and correlates. This reinforces the findings of our previous international study (Loeffler et al, 2008; Parrado et al, 2013; Bovaird et al, 2015)) and highlights the importance of distinguishing between them for policy purposes.

Individual co-production is easier than collective co-production, as it does not rely on group activities or on the reaction of other people to one’s activities. It is therefore not surprising that its level is substantially higher than collective co-production. However, the current gap between individual and collective co-production revealed here indicates that it will be a substantial task for public services to achieve the distinctive benefits of collective co-production outlined earlier.

A very clear lesson from the research is that both individual and collective co-production tend to be higher in relation to any given issue when respondents have a strong sense that people can make a difference (‘political self-efficacy’), reinforcing the strongest result obtained in our international survey of co-production (Parrado, 2013). The concept of self-efficacy has been shown to be an important determinant of citizen behaviour in both personal and political contexts (Madsen, 1987; Gist and Mitchell, 1992; Bandura, 2001; van Beuningen et al. 2011) but it has perhaps been underestimated as a potential mediating variable in shaping citizens’ willingness to participate actively in civic affairs.

Respondents are also more likely to report high levels of individual and collective co-production when they are relatively satisfied with the public sector’s consultation on that issue. There is a less frequent association between higher co-production and satisfaction with information provided – this is more evident in relation to collective than individual co-production. In both cases, there is therefore potential for public agencies to influence the level of co-production by improving consultation and information processes to ensure they are genuinely effective, rather than just carrying them out for symbolic or cosmetic purposes.

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It is particularly interesting that there is no unambiguous pattern of association between co-production and the perceptions that people have of the state of the outcome concerned (environment, safety, etc.) or their satisfaction with government response to those outcomes. While our previous international survey suggested that co-production was more likely where people felt their conditions to be poor and government response to be unsatisfactory (Parrado et al, 2013), there is a less clear-cut pattern from these UK results, although such a pattern is weakly evident in the case of poor conditions and collective co-production. Given that our international survey suggested that the level of co-production (especially of the individual type) is particularly high in the UK compared to the other four countries surveyed, it may be that, in the UK, co-production has already risen above the level at which it is influenced by concern with poor conditions or unsatisfactory government response.

It is also interesting that the levels of individual and collective co-production did not vary much with the socio-economic variables of gender and ethnic background. The exception was in relation to age, which tended to be negatively associated with individual co-production but not significantly correlated with collective co-production. The distinction found here between individual and collective co-production may be important for policy purposes, suggesting that people are less likely to seek (and should therefore not be offered) more individual-oriented approaches to co-production as they get older. However, these findings for the age variable are at variance with much of the literature, which suggests that 'volunteering' tends to rise significantly with age, and with our earlier research in five EU countries (Parrado et al, 2013), so we are continuing to unpack the relationships of age to other variables in this study.

However, the wider policy significance of this generally weak association of socio-economic variables and co-production is that it will generally be wrong to make strong assumptions about the type of people who can be attracted to co-produce public services and outcomes. All stereotypes in this sphere are likely to be misleading, as there are simply no strong patterns linking co-production to the characteristics of the most active co-producers. In public policy terms, this is both good and bad news: good news, in that it means the whole population is potentially relevant for co-production activities – bad news, in that it means that little guidance can be given on how to target promotion campaigns to attract more people to co-produce.

While the correlates identified above are simply associated statistically with co-production, and cannot be said without further research to be 'drivers', it is valuable for policy to recognise that they are likely to occur together. This means that policy should manage them as a 'package' rather than as entirely separate variables. In particular, this suggests that a successful co-production strategy with users and communities will require public service organisations to ensure their information and consultation strategies are viewed positively and to strive for high levels of belief amongst users and communities that people can make a difference.

Recommendations for future research

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On the basis of these results, we suggest that it will be valuable to explore in more detail the 'cause-and-effect' relationships between co-production and its correlates. For example, the strong positive association between collective co-production and self-efficacy does not necessarily mean that self-efficacy drives co-production, so that policy should focus on increasing citizens' perceptions of self-efficacy. It might, on the contrary, mean that engaging in collective co-production brings such positive experiences that it influences citizens to have a more positive feeling of self-efficacy. Clearly, the difference is significant in terms of the policy implications. Moreover, while many of the statistically significant relationships found in this study have conformed to the hypotheses from the literature, this has by no means been so in all cases. Consequently, more qualitative research is now needed to demonstrate the direction of the underlying cause-and-effect relationships.

Moreover, it is in the nature of the statistical analysis in this paper that it has not exposed 'thresholds' in relation to key variables – e.g. conditions, government performance, government consultation or information provision. Such thresholds are likely to be important and will be explored in further statistical work.

Future work will also probe more deeply into the elements of 'self-efficacy', particularly through distinguishing the concept of 'I believe people can make a difference' (political self-efficacy, which is what we tested in this study) from 'I believe I can make a difference' (personal self-efficacy). It may be that these concepts are also strongly linked and that a threshold level of belief in political self-efficacy must be passed before people have a strong sense of personal self-efficacy.

Further research is also planned into the reactions of public service staff, particularly front-line workers and senior managers, on the levels of co-production of which they are aware and on the kinds of barriers which they see to further development of co-production in their service areas and for the service users with whom they are most engaged. Our qualitative work on the international survey (Loeffler et al, 2008) suggested that staff often underestimated the level of both individual and collective co-production and that this, in itself, provided an obstacle to the full and systematic harnessing of the co-production opportunities in each public service. Future research could usefully explore the extent to which perceptions of staff and citizens in specific co-production initiatives differ as to the number of citizens involved and the effort they devote to these co-production activities.

Finally, the fact that the 'nudges' were only significant in a minority of instances (six out of fifteen potential cases of collective co-production) may indicate that actually there are very deep-seated drivers of collective co-production, which cannot easily be countered simply by providing 'positive framing' for responses. (And, of course, even if the attitudes reported by respondents had been influenced by the nudges, it would have been necessary to follow up to see if this had later had any effect on actual behaviour). On the other hand, it may simply be that the 'nudges' were of insufficient strength to have a reliable effect. In future replications of this research, we intend to experiment with a series of 'nudges', ranging up to very strong hints about expected responses.

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References

- Alford, J. (2002) "Why do Public-Sector Clients Co-produce? Toward a Contingency Theory", Administration & Society, 34 (1): 32-56.
- Alford, J. (2009) Engaging Public Sector Clients. From Service Delivery to Co-production. London, Palgrave.
- Bandura, A. (2001) "Social cognitive theory: An agentic perspective", Annual Review of Psychology, 52, 1-26.
- Barnes, M. (2009) "Authoritative consumers or experts by experience? User groups in health and social care". In Simmons, R., Powell, M. and Greener, I. (Eds), The Consumer in Public Services: Choice, Values and Difference. Bristol: Policy Press.
- Bovaird, T. (2007) "Beyond Engagement and Participation: User and Community Coproduction of Public Services", Public Administration Review, 67 (5): 846-860.
- Bovaird, T. and Loeffler, E. (2010) "User and community co-production of public services and public policies through collective decision-making: the role of emerging technologies" in T. Brandsen and Marc Holzer (Eds), The Future of Governance. Newark, NJ: National Center for Public Performance.
- Bovaird, T. and Loeffler, E. (2012) "From Engagement to Co-Production: How Users and Communities Contribute to Public Services". In New Public Governance, the Third Sector and Co-Production, ed. V. Pestoff, T. Brandsen and B. Verschuere. New York: Routledge.
- Bovaird, T. and Loeffler, E. (2013) "User and community co-production as a mechanism for improving public outcomes" in Staite, C. (Ed), Making Sense of the Future: Can We Develop a New Model for Public Services? Birmingham: INLOGOV.

Activating collective co-production mechanisms

- Bovaird, T., van Ryzin, G., Loeffler, E. and Parrado, S. (2015) "Influences on collective co-production of public services: Which citizens most participate in complex governance mechanisms?" Journal of Social Policy, (forthcoming).
- Brudney, J. L. (1983) "The Evaluation of Coproductive Programs", Policy Studies Journal, 12 (2): 376.
- Brudney, J.L. and England, R.E. (1983) "Toward a definition of the coproduction concept", Public Administration Review, 43, 59—65.
- Durose, C., Yasminah Beebeejaun, James Rees, Jo Richardson and Liz Richardson (2013) Towards Co-Production in Research with Communities. London: AHRC Connecting Communities.
- Gist, M.E., & Mitchell, T.R. (1992) "Self-efficacy: A theoretical analysis of its determinants and malleability", Academy of Management Review, 17, 183–211.
- John, P., Smith, G. and Stoker, G. (2009) "Nudge nudge, think think: two strategies for changing civic behaviour", Political Quarterly, 80, (3): 361-370.
- John, P., S. Cotterill, A. Moseley, L. Richardson, G. Smith, G. Stoker & C. Wales (2011), Nudge, Nudge, Think, Think: Experimenting with ways to change Civic Behaviour. London: Bloomsbury Academic.
- Jones, T. (2013), "Community capital and the role of the state: an empowering approach to personalisation", People, Place and Policy, 7 (3): 153-167.
- Joshi, A. and Moore, M. (2004) "Institutionalised co-production: Unorthodox public service delivery in challenging environments", The Journal of Development Studies, 40 (4), 31.
- Loeffler, E., Parrado, S., Bovaird, T. and Van Ryzin, G. (2008), "If you want to go fast, walk alone. If you want to go far, walk together": Citizens and the co-production of public services. Paris: French Ministry of the Treasury, Public Accounts and Civil Service, on behalf of the Presidency of the EU.
- Loeffler, E., Taylor-Gooby, D., Bovaird, T., Hine-Hughes, F. and Wilkes, L. (2012) Making Health and Social Care Personal and Local: From Mass Production to Co-Production. Birmingham: Governance International.
- Madsen, Douglas (1987) "Political Self-Efficacy Tested", American Political Science Review, 81 (2), pp. 571-582.
- Normann, R. (1984) Service management. Chichester: Wiley.
- Needham, C. and Carr, S. (2009) Co-production: an emerging evidence base for adult social care transformation. London: SCIE.
- OECD (2011) Together for Better Public Services: Partnering with Citizens and Civil Society. Paris: OECD.
- Osborne, S.P., Radnor, Z. and Nasi, G. (2013), "A New Theory for Public Service Management? Toward a

Activating collective co-production mechanisms

(Public) Service-Dominant”, American Review of Public Administration, 43: 135.

Ostrom, E. (1996) “Crossing the Great Divide: Coproduction, Synergy, and Development”, World Development, 24, (6): 1073-1087.

Ostrom, V. and Ostrom, E. (1977) “Public goods and public choices”. In Alternatives for delivering public services: Toward improved performance, ed. E. S. Savas, 7–49. Boulder, CO: Westview Press.

Parrado, S., van Ryzin, G., Bovaird, T. and Loeffler, E. (2013) “Correlates of co-production: Evidence from a Five-Nation Survey of Citizens”, International Public Management Journal, 16 (1): 1 – 28.

Sharp, E. (1980) “Towards a new understanding of urban services and citizen participation: the co-production concept”, Midwest Review of Public Administration, 14, 105-118.

Stoker, G. and Moseley, A. (2010) Motivation, Behaviour and the Microfoundations of Public Services. London: 2020 Public Services Trust.

Zeleny, M. (1978) Towards Self-Service Society. New York: Columbia University Press.