Co-creation

the new kid on the block in public governance

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Introduction

The participation of citizens and other societal actors in public decisionmaking is hardly new. What is new are the dialogical forms of participation and their breadth and intensity (Nabatchi and Leighninger, 2015). This article provides some conceptual ground-clearing for envisioning the broad-based participation of citizens and organised stakeholders in the co-creation of emergent responses to pressing problems and future needs, and it investigates how the *generative* quality of governance can support this co-creation agenda (Ansell and Torfing, 2021).

Citizen input into democratic governance depends on how democratic and administrative institutions shape the opportunities for participation. In liberal democracies, mass participation through voting in regular elections has been the primary vehicle for citizen input (Della Porta, 2013), although some countries have also involved peak labour-market organisations in tripartite negotiations and consulted citizens via public hearings and townhall meetings. Beginning in the mid-1980s, New Public Management (NPM) reforms sought to expand the involvement of public service users by letting them freely choose between providers (day-care, schools, hospitals, etc.) (Hood, 1991) while maintaining hierarchical control by using transactional service contracts. Service users were regarded as customers with needs and demands and the right to choose, but had no responsibility for service design. As such, it could be argued that NPM eclipsed the active involvement of citizens in the co-production of services to which Elinor Ostrom and her colleagues had drawn our attention in previous decades (see Ostrom and Ostrom, 1971; Ostrom, 1973; Ostrom and Whitaker, 1973; Parks et al., 1981).

In the post-NPM era, interest in what the Ostroms referred to as 'co-production' has been revived in response to severe budget constraints, demands for innovative solutions to complex problems, and the need to restore trust in public governance and elected government in the wake of the financial crisis. This inspiration comes partly from private service industries, which have discovered that customers can add value to the services they are purchasing. The service-intensive character of the public sector renders this discovery highly relevant for researchers and practitioners who praise service-user involvement in the co-production of services because it cuts costs, ensures that public services are tailored to user needs and offers users better service. Recognising that not only users but also volunteers, community organisations and a wider ecosystem of actors can contribute constructively to public solutions, the push to actively involve citizens and other

stakeholders in public governance has spread to a wider range of areas. Increasingly, co-production is used in service system redesign and to develop innovative public planning solutions (Osborne and Strokosch, 2013).[1] It is also increasingly adopted as an administrative strategy for tackling wicked problems that are hard to define and even harder to solve (Bason 2010) and as a political strategy for designing new policies in response to new challenges (Ansell and Torfing, 2017). Indeed, co-production is increasingly perceived as a tool for enhancing the production of public value defined as what has value for the public and the public values (Alford, 2010; Bryson et al., 2017; Crosby et al., 2017).

Co-production is on the rise in the public sector (Voorberg et al., 2015), and it continues to widen its scope, thus going beyond the original (and somewhat limited) view that it is essentially about involving individual users in customised service production (Brandsen and Honingh, 2016). Hence, 'co-production' is becoming more focused on strategic issues of initiation, planning and policymaking rather than merely on implementation (Brandsen et al., 2018; Sorrentino, Sicilia and Howlett, 2018). Moreover, as anticipated by Brudney and England (1983), it increasingly involves not only users and citizens but also communities, organised stakeholders and private enterprises in activities requiring some degree of formal coordination and that lead to the creation of collective goods enjoyed by the entire community (see also Alford, 2010).

To avoid unwarranted concept-stretching when moving the analysis of what is commonly referred to as 'co-production' from individualised service production to collective problemsolving and perhaps even policymaking, this paper aims to draw a conceptual distinction between user-centric *co-production* of customised services and multi-actor *co-creation* of new and emerging public solutions. Since the emphasis on the productive and creative mobilisation of societal resources in public governance, which is inherent to co-creation, brings us into the realm of collaborative governance, we also aim to clarify the relation between these closely related, yet slightly different, terms. Having thus carved out an analytical niche for co-creation, we finally discuss how co-creation can be spurred and facilitated by new forms of generative governance.

In short, the paper has three objectives. The first is to show that while co-production was originally tied to service production and merely involved individual service users and service providers, co-creation has a wider application in the field of public governance and involves a broader range of actors, activities and outcomes. The second objective is to demonstrate how the co-creation concept both builds on and extends the concept of collaborative governance, thus adding new and important dimensions to an already well-established literature on multi-actor collaboration. The final objective is to show that a strategic turn to co-creation in the public sector may benefit from a new type of 'generative governance' aimed at solving complex problems by constructing physical and digital platforms enabling the formation of arenas for co-creation. The three objectives are mainly achieved through prospective theoretical discussion and analysis

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[1] Interestingly, Osborne and Strokosch suggest that these extended forms of co-production should be labeled 'co-creation'. This is in line with the conceptualization that we advance in this paper.

aimed at providing a conceptual foundation for analysing cutting-edge societal developments. However, to add flesh and blood to the theoretical arguments, we provide a series of illustrative empirical examples that demonstrate and support our points.

We deal with these three basic objectives in order and conclude by reflecting on how different theories can help us to study co-creation as a tool for governing contemporary societies.

Avoiding concept-stretching by distinguishing co-creation from co-production

The current focus on co-production and co-creation in the public sector is inspired by developments in the private sector. The first source of new ideas about co-production and co-creation in the public sector emerged in the field of design. Designers of consumer products increasingly focused on understanding the needs and experiences of the consumer (Sanders and Stappers, 2003). Consequently, they conducted user research based on surveys, focus groups and anthropological studies to learn about their customers and began exploring new ideas about user partnerships and experimenting with participatory approaches to product co-design. The second source emanates from new thinking about how private firms interact with their customers. Prahalad and Ramaswamy (2002, 2004) argue that firm–consumer interaction has become a locus for value-creation and value-extraction. Private firms aiming to involve active and engaged consumers (and other relevant actors) in the creation of value increasingly focus on the personal and unique experiences of the users rather than the product itself and involve consumers in joint, dialogue-based problem solving (Prahalad and Ramaswamy, 2004). The marketing and service management perspective provides a third source of inspiration, which contrasts traditional 'goods-dominant' and 'service-dominant' logics. While the former focuses on how firms produce products that are then sold to distant consumers in the market, the latter insists that services are always co-produced and their value co-created in an ongoing, interactive process through which service providers and users apply and integrate their respective resources and competences (Ordanini and Pasini, 2008; Vargo et al., 2008). The service-dominant perspective emphasises that production and consumption processes are almost inseparable and that both service providers and users play an active role in shaping services (Lusch and Vargo, 2006). Later contributions have explored the role of complex eco-systems in service value co-creation, thus involving a broader set of relevant and affected actors (Lusch and Vargo, 2011).

The service-dominant perspective and its explicit focus on co-production and co-creation have immediate relevance for the public sector, because it largely produces services rather than goods, therefore lending itself to a transition to a service-centric logic (Osborne and Strokosch, 2013). To illustrate, Gebauer and colleagues (2010) show how the Swiss federal railways adopted a service-centric logic and began engaging with customers in a new way by soliciting inputs and ideas about their service experience. Public service

organisations are able to use co-production and co-creation strategically to enhance the value of public services for individual users, particular target groups and society at large and to spur the active involvement of users, citizens and perhaps even third-sector organisations in public service production (Alford, 2010).

Nevertheless, the public sector approach to co-production and co-creation may be slightly different from the private sector approach. Not only are public service organisations less driven by attempts at achieving competitive advantage than private firms operating in cut-throat markets, the users of public services will also tend to raise a wider set of conflicting demands and have agendas that go beyond the private utility of services to individual consumers. Finally, they will also tend to be more collectively organised (Brudney and England, 1983). To illustrate, railway commuters may form an organisation to enhance their collective impact on the quality of public transport services, possibly demanding lower prices (private utility) and sustainable transport (public utility), which public authorities seek to meet out of concern for democratic legitimacy.

The recent attempts made by the public sector to reap the fruits of co-production and co-creation also have their own distinct sources of inspiration in public governance theory. We have already mentioned Ostrom's trend-setting observation: that inputs used to produce a public good or service are contributed by individuals who are not a part of the same organisation (1996: 1073). Hence, providers and users are co-producing services in ways that take us beyond hierarchical government and market competition. Ostrom and her colleagues originally defined co-production as follows:

> Co-production involves a mixing of the productive efforts of regular and consumer producers. This mixing may occur directly, involving coordinated efforts in the same production process, or indirectly through independent, yet related efforts of regular producers and consumer producers (Parks et al., 1981: 1002).

'Regular producers' refers to the public agencies responsible for service provision, whereas 'consumer producers' refers to the citizens consuming said services. The two types of producers interact in the production and delivery of public services. As such, co-production is narrowly defined as the client-based co-production of services (Alford, 1998).

Beginning with Ostrom's definition of co-production, we can see how later public administration researchers have aimed to expand the range of actors involved in co-production and the range of activities it may comprise. Alford (1998) observes that involvement in co-production is not necessarily limited to public service consumers, possibly also including a larger range of community actors. Bovaird (2007) and Joshi and Moore (2004) reiterate this point. Bovaird (2007) and Brandsen and Honingh (2016) also suggest that co-production might not be limited to the delivery phase of service provision, as the input of users and other

non-public actors may extend throughout the value chain and play a key role in public service planning, design, implementation and evaluation.

Brandsen and Honingh (2016), however, insist that co-production should 'not include all inputs by citizens that may affect the overall design and delivery of a service, but focus on the direct input of citizens in the individual design and delivery of a service during the production phase' (2016: 428). As such, they define co-production restrictively as 'a relationship between a paid employee of an organization and (groups of) individual citizens that requires a direct and active contribution from these citizens to the work of the organization' (Brandsen and Honingh, 2016: 431).

By contrast, other researchers have sought to widen the spectrum of value-producing participatory activities that are analysed in terms of co-production. Bovaird and Loeffler (2013) and Nabatchi, Sancino and Sicilia (2017) have developed expansive typologies of co-production by adding the prefix 'co-' to different phases in service production. These typologies tend to stretch the notion of co-production to cover more and more activities, but it remains tied to public service production. Other researchers move beyond service production, emphasising the role of co-production in planning, public problemsolving, and even policymaking (Bovaird, 2007; Meijer, 2011; Osborne and Strokosch 2013; Bason, 2014; Ansell and Torfing, 2017; Bolívar and Pedro, 2018). Indeed, in her later work Ostrom herself went on to analyse co-production in the field of in primary schools, public sanitation and the management of common pool resources (Ostrom, 1990, 1996).

The expansive use of co-production beyond service delivery broadens the range of participants. Alford (2010) links co-production to the creation of public value, defined as what has value for the public and what the public values. Hence, while Moore's (1995) original formulation of the public value perspective highlighted the entrepreneurial role of public managers, later elaborations of this perspective argue that the focus on public value creation opens up for the contributions of manifold public and private actors (Benington, 2009; Bryson et al., 2017; Crosby et al., 2017). Alford draws the following conclusion: 'An important implication of conceiving public value in this way [as the goals and aspirations citizens have for society as a whole] is that it can be created not only by public organisations but also by a variety of entities, such as private firms, community organisations, other government agencies, volunteers, industry and professional associations and others' (2010: 144).

While most literatures use co-production and co-creation interchangeably (Lusch and Vargo, 2006), the persistent stretching of the co-production concept, which originally emphasised the active involvement of consumers in service production, to cover an ever-wider range of activities and actors calls for a clearer conceptual distinction between the two terms that allows us to enhance analytical precision and facilitate empirical comparison. While both concepts share the idea of a collaborative relationship between actors providing active input to the production of outcomes (Brandsen et al., 2018), the conceptual distinction

offered here reveals some clear differences. Hence, we shall define co-production as a basically dyadic relation between private service users and public service providers that allows both parties to make good use of their experiences, competences and resources in the service-delivery process (see Bovaird and Loeffler, 2012: 1121). In contrast, we define co-creation as the process through which a plethora of public and private actors are involved—ideally on equal footing—in a collaborative endeavour to define common problems and design and implement new, better, yet feasible, public solutions (Torfing et al, 2019). This latter definition tends to emphasise the endeavour to challenge conventional wisdom and practices and to produce innovative solutions. Hence, we draw a conceptual distinction between the 'co-production' of more or less pre-defined public services and the 'co-creation' of more or less innovative public value outcomes. The two definitions are compared in table 1.

Table 1: Comparing the definitions of co-production and co-creation

	Co-production	Co-creation
Scope	Public service production and delivery focussing on the creation of value for users(small scale)	Design of service systems, planning solutions, societal problemsolving, policymaking and public value creation (grand scale)
Actors	Public service producers and service users (perhaps also user organisations and volunteers)	Relevant and affected actors from state, market and civil society
Power relation	Highly asymmetrical vertical relation between professional service providers and users without specialised knowledge and expertise, but with valuable experiences and expertise on own needs	Horizontal relations between interdependent actors who are formally equal but may have unequal power resources
Outcomes	Efficient delivery of pre-designed services tailored to individual needs and aiming to enhance user benefit by drawing on user experience (accidental innovation)	Development of new and better solutions through innovation and continuous improvement (task accomplishment is default)
Examples	Users write the postal code on letters to enhance efficiency, fill out their tax returns to reduce errors, do post-surgical knee training for fast recovery, and help their kids with their homework to stimulate learning	Public and private actors including citizens, volunteers and civil society organizations collaborate to designing local recycling programs, enhance traffic safety and fight child obesity

By defining co-creation as a problem-focused process aiming to craft new and innovative public value outcomes, it is possible to perceive co-creation as a tool for public governance aimed at mobilising and harnessing societal resources; for example, by involving relevant and affected actors in redesigning entire service systems, solving wicked problems and developing innovative planning and policy solutions in response to new and challenging conditions.

However, despite the broad relevance of co-creation to public governance, there still seem to be considerable barriers to co-creation at the level of administrative problemsolving and public policymaking that call for practical and scholarly attention. One recent qualitative study of co-creation in three Scandinavian municipalities shows that while co-creation emerges almost spontaneously at the level of administrative service delivery and service design, public managers and elected politicians are more reluctant to embrace co-creation as a tool for societal problemsolving and policymaking (Bentzen et al., 2019). At the administrative level, co-creation is used mostly in relation to urban development projects, where it is critical to mobilise local resources and support. The strong belief in bureaucratic professional expertise means that co-creation has not yet become a shared mindset in local bodies of administration, despite the strategic commitment to co-creation. The barriers to co-creation at the political level are even stronger.

According to Bentzen and colleagues (2019), traditional perceptions of political leadership pose significant barriers to co-created policymaking. Some local politicians tend to think that co-creation undermines the political mandate they receive from the electorate, because it provides privileged influence to small groups of citizens on public solutions. Other politicians claim that politics is basically about prioritising within the available budget frame rather than trying to please the citizenry through lengthy dialogue that gives the impression that they can have it all. Finally, there are those politicians who equate political leadership with establishing a slim political majority rather than finding common ground for joint problemsolving.

Another barrier concerns the expectations among administrators regarding the role played by politicians. Some administrators clearly expect the politicians to define overall visions and goals that answer the 'what' and 'why' questions so that they can implement these visions and goals, effectively answering the 'how'. The expected division of labour between goal-formulating politicians and implementing administrators is disrupted by co-creation processes in which problems, goals and solutions are mutually adjusted in the course of interaction.

A final barrier is the lack of institutional arenas for co-creation that involve politicians, citizens and relevant stakeholders in creative problemsolving processes. It is especially difficult to design arenas that attract relevant and affected actors while avoiding participatory selection biases that undermine democratic legitimacy.

The presence of these barriers to co-creation calls for the strategic management of the transition to co-creation (Ferlie and Ongaro, 2015). Strategic visions, institutional designs, organisational structures and the mindset of the key actors must be transformed to support co-creation and to allow the upscaling of local experiments. Strategic management must be combined with hands-on, collaborative leadership to ensure desirable outcomes and prevent co-creation from becoming a locus of destructive conflicts or idle talk leading to the co-destruction of value (see Harris et al., 2010; Brandsen et al., 2018).

The relationship of co-creation to collaborative governance

Having thus demonstrated the relevance of co-creation for public governance, we acknowledge that the idea that public and private actors interact in the creation of public governance has been a centrepiece of public administration research since the pioneering work of Heclo (1978), which itself echoed earlier work by Cater (1964) and Freeman (1958). Heclo's analysis of policy sub-systems in the U.S. Congress spurred decades of research on 'policy networks' (Kenis and Schneider, 1991; Marin and Mayntz, 1991; Marsh and Rhodes, 1992). This research grew out of the study of corporatism and neo-corporatism and remained rather state-centric in the sense that collaboration with private actors was seen to be initiated and orchestrated by the state, often to secure support for public policy and regulation through formal and informal mechanisms of interest mediation.

In the late 1990s, the research on policy networks increasingly yielded to a new interest in 'governance networks' that brought together a broad range of actors from the state, economy and civil society in loosely coupled networks that secured the exchange and/or pooling of the resources of relevant and affected actors in efforts to create new and better governance solutions (Kickert et al., 1997; Rhodes, 1997; Sørensen and Torfing, 2007; Klijn and Koppenjan, 2015). This literature emphasised the interdependence of the participating actors rather than their co-optation into the state, and it pointed out the need for pluricentric coordination in the face of complexity and fragmentation (Kooiman, 1993). An extensive literature on 'collaborative governance' (Ansell and Gash, 2008; Sirianni, 2010; Emerson et al., 2012) and collaborative management (McGuire 2006) has now developed to explore this interdependence.

By distinguishing co-creation from co-production, we clearly encroach upon conceptual terrain already well-covered by the burgeoning literature on collaboration. As set out in the previous section, our concept of co-creation overlaps in particular with the concept of collaborative governance, which has been defined as 'the processes and structures of public policy decisionmaking and management that enable people to engage across boundaries' (Emerson and Nabatchi, 2015: 10). This definition is very broad and encompasses co-creation, but the concept of co-creation as we advance it emphasizes a particular agenda and some distinctive dynamics. As the umbrella concept, collaborative governance encompasses this agenda and these dynamics,

but has a broader conceptual scope that entails a wider range of agendas and dynamics. We would suggest that one of the values of the co-creation concept is that it points towards how collaborative governance is linked to other emerging governance trends.

The first and most important feature of co-creation is that it emphasizes the role of collaboration in achieving innovation. It is increasingly recognized that public sector innovation is an important agenda (De Vries, Bekkers, and Tummers, 2016). Early research on public sector innovation, however, was influenced by New Public Management reforms and largely focused on the role of managers as innovators (Borins, 2000). More recently, the literature on public sector innovation has begun to stress the importance of engaging wider groups of stakeholders in collaborative processes of innovation (Sørensen and Torfing, 2011; Torfing, 2016) and has begun to explore how the public sector can utilize new innovation strategies such as crowdsourcing (Brabham, 2015) and open innovation (Mergel and Desouza, 2013). Meanwhile, the traditional focus on firms as the primary drivers of market innovation has broadened to include a new interest in 'social innovation' and 'grass-roots innovation' which stress the value of bottom-up entrepreneurship and innovation for achieving social (as opposed to purely private) ends (Westley and Antadze, 2010; Smith et al, 2016). Drawing these ideas together, co-creation is a strategy for bringing public and private sectors together to engage in innovation to achieve public value.

Co-creation also emphasizes the value of harnessing the *distributed* nature of innovation. Collaborative governance is itself a 'decentered' process, but the concept of co-creation places particular emphasis on the the distributed nature of innovation resources and the importance of institutional intermediation for mobilizing them. Adopting an attitude embodied in design thinking, co-creation regards innovation as building on the distributed experience, knowledge, resources, and perspective of users, citizens and other stakeholders, who are seen as having the potential to engage in creative problemsolving when brought together in ways that enhance the likelihood of discovering and implementing social innovation (Brown and Wyatt, 2010; Manzini, 2014).

A third aspect co-creation is that it adopts a proactive strategy. The agenda for collaborative governance has grown out of a concern about mediating conflict with and between stakeholders, organising effective cooperation across sectoral and institutional silos, and achieving consent for public sector decisions and actions. It has been understood as a corrective to the limitations of adversarial and managerial modes of governance, one that promises a 'collaborative advantage' for working together (Huxham and Vangen, 2013). As a result, public agencies have often 'failed in' to collaboration. Co-creation envisions distributed innovation as a proactive strategy to mobilise otherwise untapped experience, knowledge, resources and perspectives for the purposes of social innovation and public value creation.

As a proactive strategy, co-creation draws on all the lessons learned by research on collaborative governance. However, it seeks to combine these lessons with those learned from recent work on distributed or open

innovation (Sawhney and Prandelli, 2000; Chesbrough, 2003). Although this research has primarily focused on the private sector, many of its ideas and insights are relevant to the public sector as well. A key lesson is that the tools of innovation must themselves be distributed to user communities' (Von Hippel, 2006), though successful innovation typically demands 'intermediation' to bridge gaps and encourage fruitful exchange (Howells, 2006). Another lesson is that distributed innovation takes advantage of opportunities for parallel experimentation and the sharing of knowledge about results of this experimentation (Sabel and Zeitlin, 2008).

In sum, as represented in Figure 1, we envision co-creation as inhabiting the conceptual niche that lies at the intersection of collaborative governance, public and social innovation, and distributed innovation. Co-creation is a type of collaborative governance that seeks to leverage distributed innovation and bring together public and social innovation for the proactive purpose of creating public value.
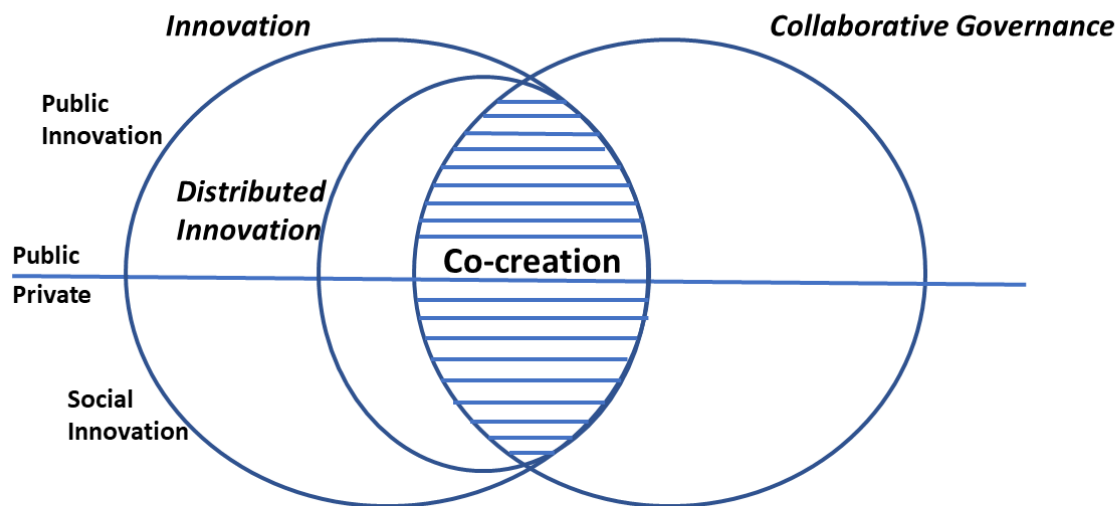

Figure 1: The Conceptual Niche of Co-Creation

To illustrate this distinctive conceptual niche, consider an example from Dutch urban planning. Rotterdam is a densely populated and low-lying city that faces the dual challenge of managing urban flooding and providing liveable urban space. To develop 'water squares' that can handle storm water and provide liveable community space, the municipality engaged a private design company to work with local residents to redesign a dull plaza surrounded by office buildings and public institutions. The company organised a participatory process based on the 'real planning' concept. Some 25 stakeholders, including pupils from a local school, users of a local gym, church goers etc., were identified and invited to participate in a workshop

series. Rather than presenting the stakeholders with a final plan for comment, they were handed a sheet of paper with a drawing of the empty square surrounded by buildings and asked to place cards with different ideas on the sheet and use pencils to add new ideas. Joint discussions of the many ideas led to the formulation of three different proposals for how to construct a multifunctional water square. These proposals were widely discussed in the second workshop, where one of the proposals was chosen. In the final workshop, a scale model of the favoured proposal was presented, and the workshop participants could all place small stickers indicating what they either liked or disliked and wanted to add to or change. The design company revised the prototype and eventually managed to gain broad support for the new water square. The result was a new type of water storage facility combining visual water flows (rain curtains dropping down from the roof of the school and open sewers transporting rain water to a low-lying basin) with a sports pitch and other leisure facilities and green islands of vegetation that draw water from the storage facility. (Bressers, 2014).

In this example, the municipality, the design firm and the local residents engaged in collaborative governance and distributed innovation to redesign an urban water square. The municipality and the private design firm organized and led the process, but their efforts focused on empowering a diverse set of public, corporate and lay actors to innovate by providing them with the opportunity and tools to engage in joint co-creation with the municipality.

Towards generative governance?

Elsewhere (Ansell and Torfing, 2021), we have demonstrated how cases of co-creation can be found across many policy sectors and levels of government and in countries from all regions of the world. Co-creation is particularly prominent in urban planning (see, e.g., Bartenberger and Sześciło, 2016; Wang et al., 2016; Rosen and Painter, 2019) and the health sector (Cepiku and Giordano, 2014; Windrum et al., 2016; Greenhalgh et al., 2016, and regionally in Northern Europe, where there is tradition for open government and a high degree of devolution (Brandsen et al., 2018; Graversgaard et al., 2018; Sørensen and Torfing, 2018). It also tends to be more prevalent at the local level (Ansell and Torfing, 2014) than at the regional, national and global levels, where there is not the same proximity between citizens, stakeholders and public agencies. However, while co-creation is 'everywhere' in the sense of being widespread across sectors and countries, we might also argue that it is 'nowhere' in the sense that co-creation has yet to establish itself as a dominant, mainstream approach to public governance. Co-creation is bubbling up in some local municipalities and government agencies, but the approach to co-creation is often hesitant, ad hoc and experimental. Co-creation still lacks a more solid and comprehensive institutional foundation in an 'institutional and administrative framework within which stakeholders with different interests can discuss and agree to cooperate and coordinate their actions' (Graversgaard et al., 2018: 14).

This observation suggests that a turn to co-creation as a general strategy for improving public governance may benefit from deliberate attempts at designing platforms and arenas that may spur and facilitate co-creation (Ansell and Gash, 2017). This move involves the adoption of a new 'generative' perspective on public governance. Whereas past public organisations and managers have sought to mobilise their own resources in terms of budgets, employees and knowledge when aiming to solve public problems and tasks, a strategic turn to co-creation encourages public organisations and managers to build platforms that can help mobilise a broad range of public and private actors and facilitate collaborative interaction to create joint and perhaps even innovative solutions. From this new perspective, the public sector should no longer 'go it alone' when facing complex problems and tasks, aiming instead to construct relatively permanent platforms capable of generating multiple temporary arenas for co-creation that enable it to benefit from 'swarm creativity' (Gloor, 2006) and 'collective intelligence' (Landemore, 2017).

As explained above, one of the distinctive features of co-creation is that it is an emergent and interactive process. Goals and solutions are not predetermined at the outset, but subject to deliberation that combines appeals to facts and knowledge, reason-giving based on argumentation, and the passionate articulation of values and identities. Tensions tend to flare up and cannot be eliminated by retreating to the hierarchical imposition of order, since that would crush the open and creative search for innovative yet feasible solutions. Instead, the strategy should be a generative one that harnesses the tensions inherent in emergent and interactive processes by facilitating regulated self-regulation by means of nurturing mutual dependencies, shaping boundaries, framing interaction, leveraging resources and distributing leadership capacities.

'Generative' simply means 'tending to generate'. It has been used in the field of linguistics, psychology and philosophy of science, but we believe that our usage of the term in the field of public governance is closest to its usage in computer science when it reflects on the role and impact of the internet. Here, Zittrain has argued that the power of the internet comes from its *generativity*, which 'denotes a technology's overall capacity to produce unprompted change driven by large, varied and uncoordinated audiences' (2006: 1980). Hence, the internet allows users to leverage resources that enable them to construct new digital communication structures and to create new solutions to problems shared across a particular audience. Inspired by this observation, we claim that co-creation is based in a new type of generative governance aiming at bringing multiple parties together to engage in productive transformation. We define generative governance as 'governance that facilitates and enables the emergence of productive interaction among distributed actors' (Ansell and Torfing, 2021). Hence, generative governance is a form of 'second order' governance that generates opportunities for co-creating governance solutions.

Co-creation is based on *generative interactions* that are forms of collaboration that enable relevant and affected actors to creatively contribute to problemsolving and the production of public value (Hopkins et al., 2014); *generative tools* that allow distributed actors to jointly produce new knowledge, ideas, products etc.

(Sanders, 2000); *generative processes* that are procedures allowing groups of actors to arrive at conclusions about joint actions by following a number of successive steps (Brown, 2008); and *generative institutions* that are infrastructures that create the spaces and opportunities for co-creation to emerge, develop and adapt (Ansell and Gash, 2017).

While researchers have been keen to study the role and impact of generative interactions, tools and processes, they have paid less attention to the generative institutions spurring and facilitating co-creation. To compensate for this shortage of literature on generative institutions, we discuss two generative institutions that may support co-creation: platforms and arenas.

Again, the literature on the internet as a source of generativity provides useful inspiration (Margetts and Naumann, 2017). Google and Apple are examples of *platforms* that allow users to come together to create new solutions that are neither prompted nor determined by the particular platform that enables them. The public sector may use digital platforms to enhance the co-creation of public value outcomes. Digital platforms allow distributed public and private actors with interest in a certain problem to come together to discuss possible solutions online, retrieve relevant knowledge and information, exchange their own ideas and experiences, design virtual solutions and plan activities enabling their implementation. Platforms may also be physical infrastructures, such as community centres, public libraries or cultural hubs that bring together different actors who form discussion groups, workshops and partnerships around common problems, challenges or ideas for future development. In Aarhus, a Danish city, a new central library, Dokk1, has become the meeting point for public employees, private actors, social entrepreneurs and citizens with ideas for how to solve pressing problems and to develop new and exciting projects that enhance the quality of life in the city.

Platforms are generative in the sense that they offer reusable resources and tools that interested actors can combine to suit their purpose (Foerderer et al., 2014). They provide flexible interfaces that connect distributed actors and organise their interaction (Kornberger, 2017). They may also foster positive interdependence between stakeholder groups and spur collaborative interaction in order to solve problems that none of them can solve on their own (Anttiroiko, 2016). Collaborative platforms are relatively permanent infrastructures that support the formation, multiplication and adaptation of collaborative endeavours through the provision of dedicated competences, templates and resources (Ansell and Gash, 2017; Ansell and Miura, 2019). Ansell and Gash (2017) note that platforms often use a franchising strategy to develop a range of parallel, but relatively autonomous, collaborations that draw on the same templates and resources, but adapt them to their own local purposes and conditions. The French anti-obesity organisation EPODE has created a platform that allows the formation of local anti-obesity groups that customise the resources provided by the platform to their own needs.

Public agencies, private companies and NGOs purposively design platforms to engage actors in joint and creative problemsolving based on problem-exploration, experimentation and implementing new solutions (Nambisan, 2009). Public agencies may also use existing digital platforms (e.g., Facebook, Nextdoor) to flag emerging problems, identify relevant and affected actors and initiate and orchestrate collaboration. For example, the digital platform *Consul* facilitates deliberation with and among citizens.

In sum, platforms are doing numerous things to encourage problem-focused interaction and collaborative innovation (Ansell and Miura, 2019). They bring attention to specific problems and opportunities by advertising their existence and constructing storylines that may attract a broad range of actors. They establish visible contact points that direct and channel participation. Platforms sometimes impose access rules that regulate who can participate, when, how and for what purpose. They frequently provide resources, communication systems and support functions that help lower the transaction costs of collaborating and procedures, routines and templates that enable interested parties to initiate collaboration and create spin-offs. Finally, platforms may sometimes offer professional advice and assistance to the managers of collaborative projects, partnerships and networks that help them to develop effective collaboration and innovation strategies and to conduct supportive activities. In short, platforms support the creation, consolidation and multiplication of arenas of co-creation.

While platforms are relatively permanent infrastructures aimed at advancing systemic and strategic intermediation between distributed actors, *arenas* are temporary and relatively self-organised spaces for participation, communication and joint action. The term 'arena' builds on the work of Bryson and Crosby (1993). However, while they draw a clear distinction between forums for communication and deliberation and arenas for decisionmaking and joint action, we argue that deliberation and decisionmaking are intertwined, since decisionmaking is normally preceded by deliberation, and the motivation to engage in deliberation is the desire to reach agreement and ultimately make important decisions.

A key generative feature of arenas is that they can call a 'public' into existence (Bryson et al., 2017). They allow relevant and affected actors to communicate with each other, frame their joint search for solutions to common problems, facilitate experimentation, and enable them to exchange and/or pool their resources and coordinate their actions in the implementation phase. In short, arenas allow distributed actors to engage in the co-creation of public value outcomes.

The same platform may support the formation of a range of different and co-existing arenas of co-creation. These arenas may adapt over time to changing conditions, and the platforms may help them to scale and multiply in response to changing needs, demands and opportunities. Feedback from the use of a specific platform and systematic evaluation may lead to slight changes in the platform that enhance its generative effects. New research provides a framework for evaluating and improving collaborative platforms by measuring their capacities for aggregating knowledge, promoting creativity and facilitating decisionmaking

(Mačiulienė and Skaržauskienė, 2016). This research provides valuable input to the practical reflections about how to manage collaborative platforms and distil best practices as well as to scientific reasoning about how to design platforms capable of spurring co-creation.

There are numerous empirical studies of collaborative platforms and their strategic scaffolding role of co-creation arenas (Desouza and Bhagwatwar, 2014; Wilkinson, Mayer and Ringler, 2014; Goulliart and Hallett, 2015; Aragon et al., 2017). Since we are here interested in how platforms may enhance co-creation at the level of administrative problemsolving and policymaking, we shall briefly illustrate the above argument by examining recent studies of the role of platforms in local governance.

At the administrative problemsolving level, Living Labs are frequently used as platforms for stimulating collaborative innovation in urban environments and promoting sustainable living (see Evans and Karvonen, 2011; Bulkeley et al., 2016; Kemp and Scholl, 2016). Living labs are platforms that construct long-term collaborative environments with a user-centred perspective and a co-creation approach that drives experimentation in real-life contexts (Reimer et al., 2012). Mulder (2012) studies three Living Labs cases that were intended to enable the citizens of Rotterdam to co-develop their city. In one of the cases, the City of Rotterdam constructed narratives about service needs based on citizen input, which were then used as boundary objects allowing citizens, university students, private firms and civil servants to reflect on the need for service innovation in arenas hosted by the seven municipal departments. The co-creation of new service solutions was fuelled by the transformation of public sector information into open data that all of the participants could access. The result was the development of new and better service solutions and growing support for using Living Labs based on open data as a platform for co-creation in the future. The example shows how Living Labs provide a real-life space for user-centric co-creation capable of attracting and engaging multiple actors by using narrative methods and providing open access to data.

At the policymaking level, a recent study of institutional reforms in the Danish Municipality of Gentofte shows how interactive political leadership is enhanced by a platform and arena design that brings politicians and citizens together in problem-focused dialogue that contributes to collaborative policy innovation (Sørensen and Torfing, 2019). As the Municipal Council wanted to strengthen the local councillors' role in policy development while soliciting input from the citizens, it designed a new institutional platform supporting the formation of a broad range of co-creation arenas, so-called Task Committees. Here, five politicians and ten purposefully selected citizens and stakeholders work closely together over several months to define a specific policy problem and formulate innovative, yet feasible, solutions. The co-creation process in the now more than 34 Task Committees is based on a written mandate formulated by the Municipal Council, which is also responsible for discussing, amending and authoritatively endorsing the policy recommendations received from the Task Committees. The local councillors and citizens judge the new

platforms and arenas for co-created policymaking to be highly successful in reconnecting citizens and local political elites, and the model has been diffused to other municipalities in Denmark and Norway.

Both examples attest to the fact that the design of platforms tends to spur the use of co-creation in public governance by enabling the productive interaction among distributed actors. However, more research on drivers and barriers is needed to establish the long-term viability and impact of platforms and generative governance

Conclusions

This paper has drawn a conceptual distinction between co-production and co-creation, mapped the conceptual relationship between co-creation and collaborative governance, and pointed to the strategic use of generative platforms to spur the formation, consolidation and adaptation of arenas for co-creation. These ground-clearing steps to promote co-creation as a core governance tool call for further research. The wish-list is long, but we would like to emphasise the need for documenting and assessing the use of co-creation outside the narrow field of service delivery and service design. Ideally, new research should use comparative methods to establish the scope conditions for using co-creation to solve societal problems and develop new public policies and to reflect on the context-sensitive role played by public management and leadership for ensuring effective collaboration and the production of public value outcomes.

Another research task is to further explore the intersection between collaborative governance and innovation. We believe there are many fruitful insights to be unearthed at the intersection between these two lively fields of research. One of the values of the concept of co-creation is that it suggests that these two bodies of research dovetail nicely, though they also tend to focus on different dynamics and issues. Understanding how to prime and empower communities to engage in distributed innovation and collaboration is a worthy topic for future research.

A final and much-needed research endeavour is to map and evaluate the current use of collaborative platforms in the public sector in order to draw lessons for future design. Comparative studies of the role and impact of physical and digital platforms may help identify synergies as well as complementarities.

With its emphasis on broad-based participation, resource mobilisation and decentred power-sharing leading to emergent and potentially innovative outcomes, co-creation carries a considerable potential in times characterised by pervasive societal problems, increased turbulence and fiscal cross-pressures. Future studies of how to reap the fruits of co-creation in public governance may draw on central insights from design thinking, empowered participatory governance, theories of collaborative innovation and governance network theory. While design thinking highlights the importance of empathy, teamwork, prototyping and

experimentation (Bason, 2010; Trischler et al., 2018), empowered participatory governance reflects on how institutional design affects effective participation in public governance (Fung, 2003), collaborative innovation emphasises the importance of mutual, expansive and transformative learning (Torfing, 2016), and governance network theory stresses the role of the inclusion and exclusion of actors, conflict mediation and proactive attempts to secure the legitimacy of networked solutions (Klijn and Koppenjan, 2015). These and others insights may help us break down the co-created governance process into different components and perhaps even establish causal connections between institutional design, participation, collaboration, learning, innovation, implementation and the production of desirable outcomes.

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