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In or Out: Developing a Categorization of Different Types of Co-Production by Using the Critical Case of Dutch Food Safety Services

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ABSTRACT

The understanding of co-production as a concept is fragmented; there are many different definitions and many cases are labeled co-production. Two dimensions seem to be important in most definitions: the ability of the co-producer to self-produce or to produce the same product without input from others and the extent to which co-producers' participation is voluntary. Based on these dimensions, this article develops a typology of co-production. It is shown that cases in which involuntariness is combined with a high ability of self-production are rare. This article contributes to the literature by studying such a case, namely Dutch food safety services.

KEYWORDS

Conceptual debate; co-production; food safety services; public services; typology

Introduction



From roughly the late 1970s, the idea of community members and public professionals collaborating to produce public services gained foothold (cf., Brudney & England, 1983; Ostrom, 1976, 1996; Parks et al., 1981). Over time, this idea became known as “co-production” and has since been studied extensively. Despite the wealth of research, scholars have yet to agree on a definition of co-production, which has resulted in a wide variety of cases studied under this heading. For example, cases of co-production include parental involvement in childcare services (Pestoff, 2008); volunteers generating small, highly tailored community-based care packages for vulnerable elderly people (Jackson, 2013); citizens participating in neighborhood watches (Van Eijk & Steen, 2013); and taxpayers providing information and calculating tax liabilities (Alford, 2009). These examples illustrate the wide range of tasks and relations of the actors involved in what are considered co-production processes. In these and other cases, the only common denominator seems to be the presence of a community member and a professional. This variety leads us to ask what exactly makes co-production “co-production”?

The wide variety of definitions developed for the term has profound consequences for research in the field of co-production, especially in terms of the comparability of research findings. Although many studies have been carried out and important progress has been made, results are rarely compared (Brandsen & Honingh, 2014). As a consequence, several important and relevant questions remain

unanswered, including what the special benefits of co-production processes are (Verschuere, Brandsen, & Pestoff, 2012, p. 19). Comparisons among different forms of co-production could help to increase our insights into these benefits.

In an attempt to overcome conceptual confusion, scholars like Brandsen and Honingh (2014) try to theoretically identify the core variables defining the concept of co-production. In contrast, this article takes an approach that is more concerned with the practical applicability of the concept. A typology of co-production is constructed using widely accepted definitions and case examples. Based on a review of the literature, it is shown that cases can differ along two dimensions: the ability to produce the same product without co-production and the voluntariness of participation in co-production processes. These dimensions create a 2×2 typology of co-production.

One cell in the typology—where the co-producer has the ability to self-produce and co-production is involuntary—cannot be easily explored, as there are few exemplary cases in the extant literature. To contribute to our understanding of this kind of co-production, this article analyses the nature of the interactions and outputs in a case that meets the requirements for this cell, namely Dutch food safety services. The research question is: *What does the interaction and output look like when the public service delivery process is characterized by involuntary participation of the co-producer and a large ability of the co-producer to self-produce?* This article starts with a literature review that aims to build a typology of co-production. It then presents the case,

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methodological approach, and data, followed by a discussion.

Co-production: A brief literature review of an umbrella concept

This section elaborates on and compares different definitions used within the literature. Thereafter, a typology is developed based on theoretical considerations and discussed using exemplary co-production cases.

Development of the concept's content

Within academia, the term “co-production” first arose in the 1980s within a more economic-oriented stream of literature, which focused on how to increase the efficiency of (local) governments and service delivery (cf., Brudney & England, 1983; Parks et al., 1981). In these studies, co-production is defined as “mixing ... the productive efforts of regular and consumer producers” (Parks et al., 1981, p. 1002). Regular producers are those “individuals and groups in a society who produce for exchange” (Parks et al., 1981, p. 1002). In this definition, the exact product is not further specified. Yet, the study offers two examples: education (the result of collaboration between teacher and student) and safety (the result of collaboration between police officers and citizens). Parks and his colleagues (1981, p. 1002) note that being a regular producer is not a fixed trait of individuals or groups in society, but that who they are depends on the specific service under scrutiny. In other words, people can be regular producers in one instance but can contribute at the same time to other goods and services as “consumer producers.” According to this broad definition, all situations in which consumers contribute in some way to the production of a public service can be designated as co-production. Whether these consumers are private actors, individual citizens, or non-profit organizations is not further specified.

In the 1990s, scholars like John Alford and Elinor Ostrom gave a new impulse to the development of the co-production concept, by emphasizing the added value of co-producers' input (e.g., time, efforts, labor). According to Alford (1993, p. 140), a wide variety of actors, other than the (regular) producing unit, can be involved in government projects, “such as the target group being regulated, or the program's clients, or other public sector agencies, or citizens generally.” Using the capabilities of these co-producing actors, governments will be able to accomplish their objectives. Likewise, Ostrom (1996, p. 1073) puts emphasis on the value of co-producers' input for the production of

goods and services, defining co-production as “the process through which inputs used to produce a good or service are contributed by individuals who are not ‘in’ the same organization.”

In contrast to Alford's (1993) definition, Ostrom (1996) seems to limit the kind of actors that can be considered co-producers to *citizens*, excluding, for example, third-sector organizations.¹ Pestoff (2012) underlines this restriction, by separating co-production from co-management and co-governance. In Pestoff's definition, co-production is about the collaboration between citizens and (semi-)public organizations, whereas co-management and co-governance are about the collaboration between third-sector organizations, public agencies, and for-profit actors. Although the processes of co-management and co-governance both include the same kind of actors, their differences lie in the activities carried out. Co-management is restricted to the delivery phase, while co-governance includes decision-making and planning activities (Pestoff, 2012, p. 18).

In recent research, scholars refer mainly to the definitions of co-production given by Bovaird (2007), and Brandsen, Pestoff, and Verschuere (2012). Bovaird (2007, p. 847) defines co-production as “the provision of services through regular, long-term relationships between professionalized service providers (in any sector) and service users or other members of the community, where all parties make substantial resource contributions.” From this perspective, the crucial difference between “normal” collaboration and “full user/professional co-production” is the dependence of professionals on users/community members to co-deliver and co-plan their activities, goods, or services (Bovaird, 2007, p. 848). In other words, four elements are important in Bovaird's definition: (1) co-producers can be actors other than citizens as long as they (2) contribute resources, and (3) have a long-term relationship with professionals that is (4) characterized by interaction in both the co-planning and co-delivery phases. In contrast, the definition by Brandsen et al. (2012) focuses on citizens' contributions. This definition adds two important elements, namely that: (1) citizens' efforts should be voluntary, and (2) aimed at enhancing the quality of the services produced.

This brief review shows that perceptions of co-production have moved from a (business) economic approach to a more political, public administrative one. In the earlier research, the focus was more on the delivery process itself, that is, how to produce public services efficiently (in terms of both quality and quantity) and how to ensure the services were produced at all (cf., Bovaird, Van Ryzin, Loeffler, &

Parrado, 2015). Later on, the focus of research moved to the actors involved in the co-production processes. Here, the definitions began to stress the efforts provided by the different actors and the dynamics and interactions between them.

Within both the economic and the political-administrative approaches, different definitions were developed. This divergence in definitions has resulted in a research field that is characterized by conceptual confusion. This has profound consequences, especially in terms of the comparability of research findings. For example, Voorberg, Bekkers, and Tummers (2014) show in their extensive review that comparisons of findings and cases are rare, and that attempts to compare findings are hindered by the use of different definitions. Therefore, the cumulative effect of past work is hampered, resulting in a low level of progress in the field (Brandsen & Honingh, 2014).

Three denominators distinguished

Above, the different definitions of co-production used over the years were briefly reviewed. A comparison of these definitions reveals three common elements: (1) the nature of the interaction, (2) who is involved as a co-producer, and (3) the nature of the output. Each of these is discussed below.

Nature of the interaction

The first element concerns the nature of the “co” in co-production, that is, the nature of the interaction between the regular producer and co-producer. The relationship between the co-producer and regular producer is perceived to be based on “exchange” (Ewert & Evers, 2012, p. 61), with professionals and co-producers acting as equal partners (Boyle & Harris, 2009), and both actors putting efforts in and providing input for this exchange (Loeffler & Hine-Hughes, 2013; Ostrom, 1996).

The nature of the interaction can also be described in terms of its duration. Here, a distinction can be made between *long-term relationships* (often in the form of institutionalized arrangements) (Joshi & Moore, 2004) and more *ad hoc activities* (Pestoff, 2012). Examples of the latter are citizens writing postal codes on letters and citizens filling out their individual tax returns (Alford, 2009).

Finally, when considering the nature of the interaction, it is possible to distinguish individual and collective forms of co-production. A *collective* nature means that the output is collectively enjoyed, or the input is collectively supplied, or a combination of both (Bovaird et al., 2015). There are two types of co-production with a collective nature. In the first type, *collective co-production*, the benefits of the output are shared by the

entire community. In the second type, *group co-production*, only a specific group enjoys the benefits from the co-production process (e.g., clients/users) (Bovaird et al., 2015; Brudney & England, 1983).

Both collective and group co-production can be distinguished from *individual co-production* processes, in which “single” co-producers collaborate with regular producers. Usually, this involves ad hoc activities (Pestoff, 2012). An example can be found in informal caregivers. Here, the input is individually provided (by the informal caregiver), and the output is individually enjoyed (by the relative receiving the benefits of the direct care provided).

Who is involved as co-producer

Within the different definitions and studies, several actors can be distinguished as potential co-producers. Citizens and clients (also labeled as consumers or users) are often mentioned, as well as volunteers, members of the community, and the general public. The question who is involved as a co-producer directly links with the above-mentioned differences concerning who benefits from the services delivered. When clients are involved, this inherently implies that the co-producers are also the direct beneficiaries of the services/goods produced. In contrast, when citizens or the general public are involved as co-producer, the co-producers not necessarily are the direct beneficiaries of the services/goods.

The critical reader would notice that none of these different co-producers are business entities; rather, they are non-profit actors. Within the literature, debate exists around the question whether for-profit or semi-profit organizations can also be involved as co-producers. For example, Pestoff (2009) analyzed a case in which third-sector organizations were involved as co-producers. Yet, in 2012 he argued that processes in which third-sector organizations are involved cannot be considered “co-production” but instead should be labeled co-management or co-governance. More broadly, the literature appears to be ambivalent with regard to accepting processes involving private actors as co-production. Several cases in the literature include private actors (e.g., Baars, 2011; Tuurnas, Stenvall, Rannisto, Harisalo, & Hakari, 2014) and others exclude private actors (Meijer, 2014; Van Eijk & Steen, 2015a) (for an overview of cases, see Voorberg et al., 2014).

Nature of the output

The third element that can be distinguished within the literature is the nature of the process’ output. Co-production processes result in more or less concrete outputs (i.e., public services /goods); examples are safe neighborhoods, activities organized at primary schools,

and letters with postal codes. Co-production is assumed to have several benefits, such as ensuring the outputs are produced at all, increasing the quantity, or improving both quality and efficiency (cf., Bovaird et al., 2015). In other words, co-production is an instrument “to produce better outcomes in terms of service quality and efficiency” (Ewert & Evers, 2012, p. 61).

The output can be beneficial to different actors at once. Often, the direct consumers benefit most; however, through “value chains” value is also added for other citizens and actors (Bovaird & Loeffler, 2012, pp. 40–42). Take for example, citizens filling out their tax forms (Alford, 2009); this is not only in their own interest and for governments’ benefits, but also for society as a whole. In this way, the value produced by co-production activities expands beyond direct users’ desires and needs and contributes to satisfaction of wider groups and society as a whole. This expansion of value especially holds true for private actors involved in co-production processes (e.g., firms, third-sector organizations), because these actors are confronted with (social) pressures for “corporate social responsibility.” That is, in their activities, they are stimulated and forced to seek ways to increase the social, environmental, and political value of the products delivered (Bovaird & Loeffler, 2012). Yet, this raises the question how added value corresponds with the short-term (economic) interests of the actors involved.

In sum, based on a brief review of definitions, three elements are found to be important in analyzing cases of co-production: (1) the nature of the interaction, (2) who is involved as a co-producer, and (3) the nature of the output. However, although these three elements are useful for structuring the description of cases (i.e., to ensure all relevant aspects and characteristics of the cases are discussed) (see Table 1), they are less useful for distinguishing among cases. Each denominator includes a number of characteristics on which cases can differ. For example, the nature of the interaction is about the equality of the actors involved, the duration of their collaboration, and the collective/individual nature. Moreover, and more important in this respect, the content of the three elements overlap; for example, who is a co-producer also links with the collective or individual nature of the interaction. In other words, the three elements are not mutually exclusive and therefore do not serve the purpose of categorization among co-production activities. For that, we need a typology with

more concrete dimensions on which cases can have a mutually exclusive score (i.e., being more or less present/visible). Given the wide variety of cases studied within the literature, it would be interesting to include in the typology not only the theoretical insights provided by the definitions, but also the characteristics of cases studied. Such an “empirically supported” typology would be of added value to the current literature, as the combination between theoretical and empirical insights has the potential to increase the practical applicability of the typology. Within the next section, such a typology is presented.

Distinguishing cases

An analysis of the elements discussed above and presented in Table 1 exposes two underlying dimensions on which the three elements are connected: (1) the ability to self-produce the product or service and (2) the voluntariness of participation. The dimension regarding the *ability to self-produce* is concerned with who the co-producer is (e.g., client, general public, for-profit entity) and what output is produced. This dimension considers the extent to which the co-producer is able to produce the same output without the input of regular producers (e.g., governmental agencies). In other words, it discusses the extent to which interaction between actors is required to produce the good or service delivered. The second dimension, the *voluntariness of participation*, focuses on the (institutional) setting in which co-producers interact with regular producers. Co-production processes can be institutionally embedded and command co-producers’ efforts and engagement; for example, Joshi and Moore (2004, p. 36) talk about such institutionalized forms of co-production and “mutual obligation.” Yet, not all co-production processes are prescribed by law; they can be organized in more ad hoc ways, or “spontaneously” be organized by co-producers’ themselves. As such, these types of activities offer more of a free choice to potential co-producers about whether to engage.

When combined, these dimensions result in a 2×2 typology categorizing co-production cases (see Figure 1). In the following, the cells in this typology are described in more detail, discussing some exemplary cases of co-production and using sectors that are often studied within the co-production literature, such as health care, education, and safety. The review by Voorberg and his colleagues (2014) shows that most empirical data is collected in the education and health care sectors, but attention to the safety sector has recently increased (cf., Freise, 2012; Joshi & Moore, 2004; Meijer, 2014; Percy, 1978). The cells

Table 1. Common elements for structuring an analysis of co-production cases.

Nature of interaction	The co-producer involved	Nature of the output
Partnership	Public/private	Tangibility output
Duration	Individual/organization	Who benefits most?
Collectiveness		

Dimensions		Ability to Self-Produce	
		<i>To a large extent</i>	<i>To a minimal extent</i>
Voluntariness of Participation	<i>Yes</i>	A Example: parents involved in activities at primary schools	B Example: neighborhood watches
	<i>No</i>	C Example: ?	D Example: client councils in health care organizations

Figure 1. A typology of co-production.

in the typology are labeled with letters, because titles might lead to a narrow interpretation of the category instead of a broad understanding of the characteristics of co-production cases in each cell.

Examining the typology, it can be observed that within cells A and B, co-producers' participation is not institutionalized by law. Often, the co-production processes in these cells are characterized by a more ad hoc nature and are bottom-up initiated and organized. Moreover, participation in the co-production activities found in both cells is voluntary. The difference between the cells is found in the co-producers' ability to self-produce; in cell A, there is a high ability to self-produce, but in cell B there is not.

An exemplary case for *Cell A* is that of parents organizing and guiding activities at primary schools (e.g., Christmas celebrations, school trips, school gardens). These activities are referred to as "social participation" (Pestoff, 2008, p. 21). Parents volunteer to help organize these activities. Although the schools' input is useful for the organization of these activities, it is not necessary. In other words, parents are able to organize a celebration without the schools' (active) input. Nevertheless, the fact that a co-producer would be capable of producing the output himself does not mean that the collaboration with the regular producer is not of added value. Not only can the regular producer provide capacity (time, money, and knowledge), but his involvement can also help "legitimize" the activity.

Within the co-production processes represented in *cell B*, the ability to self-produce is much smaller. Exemplary cases include neighborhood watches. Research shows that—although municipalities can facilitate and stimulate neighborhood watch by offering the required resources (e.g., training and materials) (cf., Van der Land, 2014)—citizens organize *themselves* into teams to patrol streets, de-escalate troubles with youth loitering, and report malfunctioning streetlamps, for example. However, although these activities appear to be carried out by the citizens themselves, pure self-production in the case of neighborhood watches is not possible for several reasons. Being part of the

neighborhood watch team brings the members of these teams into situations that could turn violent, without being able to sufficiently protect themselves. These teams do not have the authority to make arrests, and as such the teams are not able to eliminate the threat. Therefore, backup by the police is always needed. Without this backup system, citizens are less willing to participate in neighborhood watch teams (Van Eijk & Steen, 2015a). To phrase it differently, the neighborhood watch teams are not able to produce the final "product" of safety on their own; they need the collaboration of police agents as "regular producers."

In contrast to cells A and B, participation in the co-production activities found in the bottom cells of the typology (cells C and D) is non-voluntary as it is required by law. *Cell D* contains the co-production processes in which this involuntariness is combined with a low and in some cases non-existent ability of self-production. An exemplary case can be found in the health care sector. In several countries, patients are given a voice in the planning, delivery, and evaluation of health care services, although the exact shape of this input can differ. In The Netherlands, each health care organization is obliged by law to install a client council to discuss all relevant issues (Rijksoverheid, 2011). In this case, the council members are dependent on the health care organization, since they as co-producers cannot produce the same output (i.e., health care of a good quality) without input from the professionals. Similarly, the health care organization is dependent on the co-producers, not only to comply with the law, but also because the collaboration with the client council is part of the performance indicators established by the Dutch Health Care Inspectorate. The dependence on the co-producers becomes even clearer when one realizes that the council has the legal right of approval on some of the policy issues, meaning that some of the policy initiatives cannot be implemented without the council's approval.

Finally, *cell C* captures cases of co-production in which the involuntariness of co-producers' participation is combined with a large ability to self-produce.

While this cell logically results from the two dimensions in the typology of co-production, the current co-production literature does not, to our knowledge, contain cases that fit into this cell.

To contribute to our understanding of this type of co-production, this article presents and discusses the case of the Dutch food safety services in regard to slaughterhouses. This case fits within the characteristics captured by cell C: involuntariness and the ability to self-produce. On the one hand, slaughterhouses are perfectly capable of producing a tangible meat product, but on the other hand, the law requires Dutch food safety services to clear the tangible meat products as safe for consumption before these products are allowed in the food chain. The added value of the co-production process can be found in the (lack of) self-regulating capacity of the sector; due to economic interests, complete self-regulation is not an option. Before discussing the nature of the interaction and output, and who is involved as a co-producer, the next sections provide the case background and research methods.

Dutch food safety services

Traditionally, an important task assigned to governments is to reduce risks for society in different fields of daily life. One of the inspection services from which Dutch citizens benefit on a daily basis is the Dutch food safety services. The Netherlands Food and Consumer Product Safety Authority² (NVWA) is charged with, among other things, safeguarding the values of public health, animal health, and animal welfare (NVWA, 2014). In this article, the focus is on the NVWA Department of Veterinary & Import, which is charged with monitoring the food production chain where live animals are involved. The Dutch food safety services employs around 400 veterinarians, both on a contract basis and as civil servants, which makes it the largest employer of veterinarians in The Netherlands.

In recent years, perceptions about how inspections should function have changed. In 2006, the Dutch government launched a campaign—entitled “Renewed Surveillance”³—to reduce the “inspection burden” for businesses and to make inspection services more efficient and effective (Inspectieloket, 2014). As stated in the policy document, the program’s underlying starting point is that there is “trust in businesses, unless...,” which actually means that fewer inspections are performed in companies that have “proven” themselves to work according the rules. This resulted in a new type of inspections—risk-based inspections—that are only performed when risks are identified. This new type of inspection has altered the relationship between

inspector and inspectee. Risk-based inspections are usually combined with system-based inspections, based on the Hazard Analysis and Critical Control Points system of inspectees (Inspectieloket, 2012).

These developments also have influenced the inspection approach of the NVWA. This approach has not only become more risk-based, but also more dependent on the knowledge and cooperation of the meat industry (NVWA, 2014). The main assumption behind this approach is that businesses adhere to rules and regulation and are capable of organizing their own inspection processes. However, a recent report of the Dutch safety board⁴ (OvV, 2014) put this philosophy to test when it concludes that the self-rectifying behavior of the sector is unsatisfactory. The board asserts that the withdrawal of food inspection was premature, as food safety was not safeguarded (OvV, 2014). The report shows an inspection service where inspections not only have been reduced but also have become more systematic and routine. This has led to goal displacement, in which inspection has become a goal in itself. In addition, the sector deals with small profit margins, making the willingness from companies to self-rectify low. According to the Dutch safety board, this has created a situation in which meat safety is under pressure.

The board recommends the improvement of co-production in the sector as one of the main solutions to improve meat safety. It emphasizes the need for “public and private parties in the meat production chain to interpret their responsibilities appropriately. They both need to feel more responsible for their common goal: safe meat for the public” (OvV, 2014, p. 6; authors’ translation). As the recommendations of the reports revolve around increased exchange of information and correction of each other’s behavior, the conclusion appears to be that the co-production between public and private parties in the meat industry needs to improve (OvV, 2014).

Research methods

To examine the case of Dutch food safety services, the elements derived from the different definitions of co-production are used to analyze this particular co-production process, namely: (1) the nature of the interaction, (2) who is involved as a co-producer, and (3) the nature of the output. To analyze the co-production process, archival documents were used along with 38 semi-structured interviews with veterinary inspectors. The respondents were selected based on gender, age, tenure, and employment contract to maximize variation in the sample (a strategy referred to as purposive sampling (Weiss, 1994)). Within the

interviews, the focus was on the different perceptions, motivations, and behaviors of veterinary inspectors regarding their work.⁵

The introduction of risk-based inspection has increased the influence of slaughterhouses in the inspection process. From the inspectors' perspective, this fact combined with the hierarchical nature of the co-production process elevates the importance of determining how to handle this change. As research on how changes in the co-production process affect professionals is still in its infancy (cf., Van Eijk & Steen, 2015b), this article specifically focuses on the co-production process from the perspective of the regular producer (i.e., the inspector).

Since the article aims to better understand a kind of co-production that is rarely studied within the co-production literature, the use of deductive, a priori assumptions needed to be avoided. In other words, the concepts and their relationship are based as much as possible on the empirical data; a method that fits with a grounded theory approach (see for example Glaser & Strauss, 1967). The coding process of the qualitative data collected is pivotal for securing scientific rigor in qualitative research (Boeije, 2010). Therefore, considerable attention was paid to the coding of the interviews using the software-program MAXQDA. To establish inter-rater reliability, the coding of the different interviews was discussed among the researchers. Where differences in interpretation existed, a shared interpretation was established.

The coding of the empirical data started from three different questions based on the common elements in co-production (Table 1), including: (1) what is the output of the co-production process in Dutch food safety services?, (2) who in this process is the co-producer and who the professional?, and (3) what is the nature of the interaction between inspectors and inspectees in this case? In the following sections, the findings of this study are presented. The quotes used to support the analysis are reported by interview number and translated from Dutch.

Co-production and the NVWA: Output, actors, and interaction

This section analyzes the case of Dutch food safety services, using the three elements of output, actors, and interaction. Each element is discussed individually.

Output

To determine the output of the co-production process, it is important to make an analytical distinction

between two processes. First, there is the "normal" slaughtering process, resulting in a tangible meat product. Yet, this product in itself is not sellable, as it is not legally allowed in the food chain. This is where the co-production process comes in. The tangible meat product only results in a "public output" of meat that is allowed in the food chain and safe for citizens to consume after the co-production process takes place. Interestingly, this identifies two direct consumers of the co-production process: the companies that are allowed to sell their meat and the consumers that can eat meat without health risks. In fact, the benefits of sellable and safe meat even go beyond the direct interests of both consumers, as the selling of safe meat also stimulates the economy.

Regular producer versus co-producer

Because of the above-mentioned difference between the slaughtering and co-production processes, it feels counterintuitive to address inspectors as regular producers, because they are not in charge of the main production process of the good (i.e., meat). To be more precise, the label of "regular producer" reflects the development of "traditional public service delivery processes" toward "co-production processes." That is, the actor previously responsible for the entire delivery process (including planning and implementation) is now perceived as the regular producer who collaborates with other actors (i.e., the co-producers). To give an example, before clients got involved in the health care process through client councils, it was the management who took all the decisions on its own. Similarly, police have always been the main producer of safety, but are now using co-production (i.e., neighborhood watches) to increase effectiveness. The main point here is that the regular producer is considered the professional, being previously solely in charge of the delivery process.

Coming back to the case of Dutch food safety services, conflicting signals can be identified regarding the identification of regular producer and co-producer. First, inspectors' knowledge about meat production is limited. As interviewee 13 notes:

the veterinarian that starts working now, does not learn anything about it [practicalities of the meat production]. That makes it more difficult, because, then it could be that you just overlook it. Then you can have a lot of theoretical knowledge, but if you do not recognize it that is the end.

Second, inspectors also depend on slaughterhouse employees for practical support. For example, because there are large numbers of animals, some animals are

“missed” during inspections. In these situations, inspectors rely on employees to bring these animals back for further inspection. Interviewee 8 explains:

In other words, there is a constant stream [of animals] and then you need, with those 2, 3, 4 men in good collaboration, to run things smoothly and that you agree with each other.

From this perspective, it is the slaughterhouse who has the professional background.

However, the professionalism of this knowledge relates to the slaughtering process itself. The co-production process is about more than just the production of tangible meat products; it is also about clearing the product as safe (see also Section 5.1). In this process, the roles are reversed as inspectees are dependent on inspectors to clear the animals as safe based on their professional knowledge of veterinary medicine. In other words, only inspectors can determine whether the animals are safe for consumption, meaning inspectors are in charge of the co-production process of food safety. Therefore, the conclusion is that inspectors are the regular producers of the public output of safe meat.

Interactions

Finally, the nature of the interactions between the companies and inspectors is intense and characterized by a complex dynamic of mutual dependencies and hierarchical relations. Veterinary inspectors work within different companies within the same sector (i.e., cattle, poultry, or pigs), which allows them to compare the different companies. Large differences are perceived in the dispositions of companies. Where some are considered cooperative, others are infamous for trying to hinder veterinary inspectors in their work. As interviewee 34 notes,

Some companies are sympathetic [towards inspectors] and are willing to assist [the inspectors]; others perceive the government as nuisance and cost factor. That is more difficult.

Inspectors report that meat companies generally have negative dispositions toward the Dutch food safety services. The fact that companies have to pay (per 15 minutes) for the work of veterinary inspectors is one of the factors fuelling this negative attitude. Another factor is the costs involved with the rejection of animals or meat. This issue was raised by interviewee 2, who said:

In that sense, the pressure is high, a lot is expected from us. We are paid per 15 minutes, that's not cheap and so the farmers and entrepreneurs would rather see us go.

Inspectors notice that inspectees adopt strategies to minimize the amount of time for which they have to pay,

for example, by requesting less time than needed and by trying to convince inspectors to perform small extra inspection jobs without writing extra time. However, tensions are most prominent when inspectors need extra time for enforcement. Therefore, enforcement is considered detrimental to a good working climate, or as one inspector (10) said, *when you enforce, your working relation is non-existent and you cannot build any credits through the years.*

The interviews also show that companies constantly test how much elbow-room they can get. Therefore, some inspectors compare their relationship with the companies to a game between cat and mouse or the relationship between a parent and a child. For example, interviewee 26 states:

Just compare a slaughterhouse with a 4 or 5 year old child. They try you. They don't see the consequences. They don't take responsibility. They take many risks. It is exactly a 5 year old [child].

Most inspectors perceive this “testing” as an unavoidable part of the job, with which they have to deal every time they go to a new company.

In this respect, the attitude of the company's middle management is important, as they have to rectify the infringements observed by the inspectors. Inspectors perceive them as being pivotal to a successful inspection and a good working climate. In part, the importance of middle management could be attributed to the low job security of employees working in the slaughterhouses. As most workers in the slaughterhouses are uneducated, barely speak Dutch, have a temporary contract, and are afraid to lose their jobs, middle management holds a power position and is usually not contradicted. In some cases, managers are even suspected of communicating orders that are different from the demands posed by the inspector. For example, interviewee 8 noted:

At this company, I am the company inspector and the company is a difficult case, so at the start I have been very strict. And at a certain moment employees were not allowed to speak with me anymore, because they told me too much, and as a result I found out about things that I should not have found out[...] Yes, you are really the enemy, that is something you have to learn to deal with.

Tensions in the interaction between the inspector and company also arise when companies are confronted with differences in enforcement—such as when some are punished for an infringement that other companies get away with. This is the result of rotations and irregular shifts, making contact moments between inspectors few and far between. It is therefore difficult to harmonize the different ways in which veterinary inspectors work and communicate specifics about the companies. Furthermore, the lack of

uniformity stems from the fact that veterinary inspectors have different ideas about how cases should be handled and different attitudes toward enforcement. This is clear in a statement by interviewee 5:

You try to be consistent. And we know that from each other [the inspectors], that we have to be [consistent]. And we do that, but of course from our own point of view.

As the meat production sector is small, companies are aware of the differences between individual inspectors, and they use this information to play the veterinary inspectors off against one another. Their strategic behavior goes as far as farmers sending animals to slaughterhouses where they know inspection is less strict. Interviewee 18 remarked:

I know, for example, that certain customers don't go to specific slaughterhouses, because they [inspectors] are less strict somewhere else.

The tensions mentioned above all originate from the clash between the output aimed for by the inspection services ("safe meat") and the "corporate responsibility" of the companies to increase the profit margins of their organization.

Aggressive company attitudes toward inspectors are another factor that disturbs the relationship between inspectors and companies. As a result of the culture within slaughterhouses and tensions from enforcement, aggressive behaviors toward veterinary inspectors are common. These behaviors range from passive-aggressive tendencies, such as posturing or verbal aggression, to bullying, and even actual physical assaults. Again, most veterinary inspectors seem to accept this as part of the job.

These tensions in the interaction demand a lot of the inspectors—they must have the capacity to cope with the co-production process and prevent interactions from escalating. First of all, inspectors need to be confident that the decisions they take are correct; inspectors emphasize it is important "to think before you speak" so as to not say something incriminating. Of course, there are also situations with which inspectors are not sure how to deal; in these cases, inspectors can postpone their decisions and consult colleagues. Inspectors also emphasize the importance of information to support their decisions. For example, in cases where legal action is taken, it is critical that the inspectors have extensive and conclusive empirical evidence (e.g., pictures, autopsies, bacteriological tests). This is emphasized by interviewee 34:

First, I need to make an inventory: 'what exactly is going on here?' Then I have to map everything; you cannot enforce just like that, if you do not know [the exact situation] ... You need to build your argument.

Inspectors also put much emphasis on how to deal with tense situations. Inspectors mention that in some cases it is better to let inspectees calm down on their own and walk away from the situation. Interviewee 3 insinuates that the inspector's experience is decisive in the decision how to approach a situation:

I'm quite good at getting them [inspectees] to calm down. Eeh, I'm not going to put butter in front of a cat. I think that I, yes I have experience enough, or enough insight in this. 'I should do this or this; I shouldn't do that. Do I have to walk away?'

When inspectors have discussions with inspectees in tense situations, they try to play on the human need to be heard and understood. Therefore, inspectors let inspectees vent about issues and show their understanding regarding the difficulties inspectees' experience. This does not mean that they automatically give in to their wishes, but usually it creates a starting point for further discussion. As interviewee 19 states:

Yes, show sympathy, let them [inspectees] talk and talk. When it is done, you say 'I understand your situation and I sympathize, but we have more work to do'.

The interaction between inspector and inspectee takes place on a daily basis, and there is a mutual dependency. However, authority is held by the inspector. Inspectors really try to focus on their own tasks and leave the responsibility for changes as a result of enforcement up to the companies. The main challenge in keeping the co-production process effective is to maintain what they call "a professional distance," which makes it easier to enforce rules and regulations and not get captured by the interests of the organization. This goes as far as not taking coffee from the coffee machine without being offered (interviewee 1):

I always try to keep a safe distance to the company, that they do not know too much about me. And that I do not know too much about them. I would never take coffee in the canteen, unless it is offered [...] If I have a good relation with them, then I find it more difficult to enforce.

Discussion

This article started with a literature review that identified three common elements in the co-production process, providing several indicators useful for structuring an analysis of co-production cases. Yet, these common elements are not useful in making mutually exclusive distinctions among co-production cases. Therefore, a typology is developed that can be used to categorize cases. This typology consists of two dimensions: (1) the ability of co-producers to produce the same product

without the input of regular producers and (2) the voluntariness of participation in co-production processes on the side of the co-producer.

Although the literature review revealed many cases of co-production for three of the cells in the typology, we did not find exemplary cases of co-production processes where participation is involuntary and the ability to self-produce is high. To further examine this kind of co-production process, an exemplary case was introduced, namely Dutch food safety services. In the article, the case was described by its output, actors, and interactions. In the analysis, it was noticed that certain factors are characteristic of this type of co-production cases.

First, the *involuntariness* of the collaboration strains the inspector–inspctee relationship. Tensions in the collaboration are a result of the clash between the economic interest of the inspected facilities and the public values safeguarded by the inspections. Therefore, actors in this co-production process are constantly aware of its involuntary nature. A comparison with another involuntary case (client councils in cell D) suggests that these tensions are also present. Although client councils are institutionalized to safeguard the quality of care, this is not the only potential interest represented by the council’s individual members. Research shows that there are also less altruistic reasons to be part of client councils (Van Eijk & Steen, 2014). Moreover, the reorganization of health care on a free-market basis has increased the constraints on health care organizations. Thus, while the client council and the health care organization may have a similar interest (i.e., good care), cost reduction has also become an important goal for health care organizations, which potentially results in tensions between these actors.

In short, tensions in the relationship between the regular producer and the co-producer seem to be a characteristic of cases where participation in co-production is involuntary. The intensity of these tensions is dependent on the conflicting nature of the values and interests of the actors involved. Further research will be necessary to see how the involuntary nature of these co-production processes impacts the interactions between the regular producer and the co-producer. More specifically, it will be important to investigate how the coping strategies of regular producers and co-producers differ in these types of co-production.

Second, focusing on the dimension of the “*ability to self-produce*,” the case of Dutch food safety services shows a mutual dependency between the inspector and the inspctee in terms of both

knowledge and practical support. Ultimately, however, the inspector adds public value to the product by having the sole authorization and professional knowledge to clear the meat as safe. In other words, the co-producer has a high ability to self-produce in terms of tangible meat products, but the public trust induced by the inspection—an important result of the co-production process—is not something that the co-producer could achieve on its own.

A comparison with a case in cell A where the ability to self-produce is also high, for example parental involvement in primary schools, shows again that legitimizing the activities of the co-producer is the main added value of the co-production. That is, the schools’ involvement guarantees a certain contribution to children’s development and the safety of their participation. This legitimization takes place in both cases, even though the cases differ with regard to the co-producers’ freedom to “use” this legitimizing role of the regular producer. Where slaughterhouses are required by law to enter the co-production process in order to sell their products, parents have the option available to organize activities on their own without collaboration with primary schools. Further research should focus on the extent to which co-producers assign value to this contribution of the regular producer.

These comparisons helped to answer the article’s main research question: *What does the interaction and output look like when the public service delivery process is characterized by involuntary participation of the co-producer and a large ability of the co-producer to self-produce?* With regard to the interaction, the involuntary nature of participation evokes tensions between regular producers and co-producers. These tensions are intensified when there is a conflict of interests and values in the co-production process. The second part of the research question deals with the output of this specific type of co-production processes. Even though the co-producer has a high ability to self-produce, the collaboration with the regular producers still results in added value, namely legitimization of the tangible product.

Finally, a more fundamental question underlies this research, namely: what is co-production and what is not? By using a case in the margins of the concept, this research hopes to encourage a scholarly debate on what cases are still considered co-production by the scientific community. Can all types distinguished in the typology really be perceived co-production or not? To phrase it differently, are cases similarly to Dutch food safety services in or out?

Notes

1. Third-sector organizations are organizations that are placed “in between” the public and private sectors. The term includes a broad range of different organizations, such as voluntary or community organizations (e.g., charities and associations), social enterprises, and co-operatives (National Audit Office, 2015).
2. The Dutch name of this organization is *Nederlandse Voedsel- en Warenautoriteit*.
3. The Dutch name of this project is *Vernieuwing Toezicht*.
4. In Dutch, this organization is called *Onderzoeksraad voor Veiligheid*.
5. More details about the interviews and respondents can be found in Schott, C. (2015). *Playing a role-but which one? How public service motivation and professionalism affect decision-making in dilemma situations* (Doctoral dissertation). Den Haag: Universiteit Leiden., and Van Kleef, D.D. (2016). *Changing the Nature of the Beast: How organizational socialization contributes to the development of the organizational role identity of Dutch veterinary inspectors* (Doctoral dissertation). Den Haag: Universiteit Leiden.

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