The Potential Pitfalls of Co-production: An Overview on the Co-design of Public Services with and for Family Caregivers Living in Rural and Remote Area

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Abstract

**Background:** Co-production has been widely recognized as a plausible solution to reduce users’ dissatisfactions, service providers’ inefficacy and to diminish conflicts in relations between users and providers. However, this enhancement of co-production has started to be query: co-production is not always a panacea and its effects may not be always fruitful. To understand and prevent unsuccessful users and providers’ collaboration, the recent literature has stated to focus on the causes of co-destruction. This paper investigates the possible factors that may facilitate the shifting of a co-production process applied to family caregivers of older patients living in rural and remote area, into a co-destruction process by looking at the whole service network.

**Methods:** To investigate this open topic, we performed a single case study by looking at a longitudinal project (Place4Carers) that aimed at co-producing a new public service with and for family caregivers of older patients living in rural and remote area. We organised collaborative workshops and semi-structured interviews to collect the perspectives of family caregivers and service providers on the co-production process. As part of the research team that participated at the co-production process, the authors joined the reflections with a reflexive approach.

**Results:** Results confirmed the occurrence of some causes of co-destruction suggested by Jarvi’s model during the co-production process: insufficient level of trust, mistakes, inability to change from caregivers and inability to serve from providers. Moreover, they identified the difficulty of creating a cohesive partnership between research members as a possible pitfall of co-production. However, all these causes did not imply an inevitable process of co-destruction.

**Conclusions:** Our article suggests that pitfalls identified by Jarvi and the cultural differences within research members can actually influence co-production but do not inevitably lead to co-destruction. Moreover, we argued that co-creation and co-destruction processes might coexist. The role of researchers and service providers is to prevent and recover from co-destruction effects. To this ends, conviviality could be a powerful tool to avoid lack of trust and create a successful co-production.

**Plain English Summary**

Co-production, defined as ‘the provision of services through regular, long-term relationships between professionalized service providers and service users or other members of the community, where all parties make substantial resource contributions’[1], has been widely recognized as a plausible solution to reduce users’ dissatisfaction, providers’ service inefficacy and to diminish conflicts in relations between users and providers. However, the effectiveness of co-production has started to be queried. This paper investigated the possible factors that may facilitate the shifting of a co-production process into a co-destruction process by looking at all the actors of the service network. To this end, we performed a single case study by investigating the co-production of new public service with family caregivers of elderly people living in rural and remote area, a local home care agency and researchers. Participants were interviewed about pro and cons of the co-production process.
The results highlighted that the effectiveness of co-production was limited by some pitfalls: insufficient level of trust, mistakes, inability to change and inability to serve. Moreover, a difficulty of creating a cohesive partnership between research members has been highlighted as a challenging factor in the co-production process. However, all these factors did not imply an inevitable process of co-destruction. Indeed, the process of co-production resulted to have both pitfalls and benefits. Therefore, researchers and service providers should facilitate the shifting from negative toward positive effects of co-production. To this ends, conviviality could be a powerful tool to avoid lack of trust and create a successful co-production.

Introduction

In recent decades, practitioners and researchers have identified co-production as a possible solution for several managerial issues. Indeed, recent studies have suggested co-production as a means to increase users’ satisfaction with and trust in service providers [2], enhance innovation [3], and improve the effectiveness and efficiency of products and services [4, 5]. However, its fame has increased to such an extent that the co-production concept has ‘enchanted’ its audience [6]; it seems to have become a magic solution for both public and private challenges [7]. But this optimistic view of public engagement is unrealistic [8]. Organizations may encounter difficulties in involving citizens. For instance, the misalignment among goals, power [9], knowledge [10], expectations, and engagement [11] may reduce the possibility of equal interaction. Hence the effectiveness of citizens involvement cannot be taken for granted [12]. For this reason, scholars have started to challenge co-production by highlighting that ‘it is not a panacea’ [1](pp. 856). Within this scenario, interest in the concept of co-destruction has emerged. Co-destruction can be defined as ‘an interactional process between service systems that results in a decline in at least one of the systems’ well-being (which, given the nature of a service system, can be individual or organizational)’ [13]. It is the ‘dark side’ of the co-production process in which actors co-destroy value by interacting with each other [14].

The factors that cause co-destruction are not easy to detach [15]. For instance, an interactional process between users and providers may fail because users do not have enough information about the topic of discussion [16]. On the contrary, it may fail because the organization does not want to share some information with users [15] or because the local rules and regulations do not allow organizations to share that information [17]. Finally, the failure may be caused by all these three reasons together, demonstrating the intricacy of this field.

However, complexity is not the only reason why the investigation of co-destruction is relevant and crucial. Understanding the antecedents that cause service failure has both practical and theoretical benefits [6]. On the one hand, organizations may succeed in preventing or limiting negative actions due to the interactions among actors. On the other hand, scholars may be able to analyse co-production and its effects critically, opening the way to a conscious re-enchantment of this magic concept [7].
Despite the importance of co-destruction, the current literature has made little effort to investigate its causes, highlighting the urgency for future study in this field [18]. To date, co-destruction has garnered more attention in the private service literature than in the public service one [15]. However, this imbalance does not reflect a difference in terms of importance of investigation. Public service failures may be even more distrustful than private ones because they affect the life and well-being of not only consumers but also all citizens. Public services are omnipresent in everyday life: public transport, waste collection and recycling, public healthcare services, education, water distribution services and many others, and have a high number of users. Thus, the importance of public services makes the investigation of service failure in this sector crucial [19].

Studying co-destruction in public service is challenging for at least four main reasons. First, the investigation of this topic is limited [20]. Second, the theories and findings that comes from private services may not immediately apply to public ones [19]. For instance, the strategy of refunding dissatisfied consumers may succeed in the private sector but not in the public one [19]. Third, the evaluation of co-destruction requires analysis of the entire service network involved in co-producing activities insofar as each actor (service providers, users, public bodies and other relevant entities or organizations) impacts on service outcomes [13]. Thus it is important to analyse not only the perspectives of users or providers but also those of all the other actors in the network [13, 15]. Finally, the investigation of co-destruction is particularly discussed when it involves vulnerable and marginalized citizens. The current literature is challenging the possibility to involve vulnerable and disadvantages users in the co-production activities as it may affect negatively both the service system and the well-being of these actors [21]. Indeed, vulnerable and hard-to-reach citizens may be unwilling or unable to participate [22, 23] and may not have the abilities necessary to collaborate in partnership with providers[24].

On the basis of these considerations, this paper investigates the possible factors that may facilitate the shifting of a co-production process applied to a public service for family caregivers of older patients living in rural and remote area into a co-destruction process by looking at the whole service network.

For this purpose, we use the following analytical procedure. First, we collect the successful and unsuccessful drivers of co-production by looking at the interactions that occur in the overall service network during and after the collaboration. Second, we focus on the potential pitfalls of the co-production process by using a co-destruction framework developed for public and private services. Third, we reflect on the peculiarities and issues of involving vulnerable actors in co-production processes.

By investigating this field, this paper responds to calls for studies on potential dysfunctional aspects of co-production in the public service literature [6, 7, 14, 20, 25] and opens for future studies.

Therefore, our study is organized as follows. First, we analyse the concept of co-destruction and investigate its theory in the public service literature. Second, we investigate the involvement of family caregivers in the co-production of new public services by collecting the perspectives of all the actors in the service network. Finally, we organize the main results in terms of the causes that facilitate the process of co-destruction.
Theoretical Background

Defining co-destruction

The existing literature reports several and different definitions of co-destruction[17], making the concept confused and imprecise [11]. To make the scenario even more complex, academics refer to the co-destruction concept by means of different terms, such as: ‘value destruction’ [26], ‘value diminution’ [27], ‘value no creation’ [28] and ‘destruction of common value’ [17, 29]. However, almost all the definitions agree on considering co-destruction to be an ‘interactional process’ in which different stakeholders are involved and fail to integrate each other parties’ resources, reducing the well-being of one or more stakeholders [13]. To understand the possible causes of co-destruction, we should take a step back and reflect on the possible sources of service failure. According to Grönroos, the value process occurs in three phases: the provider, joint, and user spheres. In the provider sphere, service providers (and other stakeholders of the service ecosystem) organize their resources for the co-production activities. In the joint sphere, users and providers interact by integrating each other parties’ resources [30]. In the user sphere, users make their own perception of the interactional process and the service either alone or with peers [31, 32]. On the basis of these considerations, the causes of a service failure may arise in one or more of these spheres [15]. For instance, in the provider sphere, service providers may fail because they did not organize and set sufficient resources for the co-production activities. In the joint sphere, a service may fail because users and providers argue and misbehave with each other. Thirdly, in the user sphere, co-destruction may arise because users have a negative experience of the service. In other words, co-destruction may be caused by factors that arise before, during, or after the interactional process. Thus, the causes of co-destruction should be analysed by investigating how participants organize and integrate their resources not only during the interactional process but also before and after it.

Co-destruction vs. co-creation

The existing literature defines co-creation and co-destruction as ‘two sides of the same coin’ [33]: co-creation is the interactional process that improves the ‘service system’s well-being’ [34] (p. 149), while co-destruction is the interactional process that reduces ‘at least one of the systems’ well-being’ [13]. Although co-creation and co-destruction generate opposite results, they are considered two dynamic processes that may coexist [17] and alternate with each other over time [33]. The concurrence and dynamics of these opposite processes can be explained by three main factors. First, the effects of the resource integration may be perceived as positive by some participants and negative by others at the same time. Since the effects of the interactional process depend on the individual perception of each participant [35], the same co-production activity may be experienced in different ways by participants, generating both positive (i.e. co-creation) and negative (i.e. co-destruction) effects [8, 11]. Second, the co-destruction process cannot be considered an absolute loss of value [15] because it may still yield some expected and planned benefits and effects [27]. For instance, the interactional process that occurs during co-production activities can increase users’ well-being by enhancing their satisfaction and, at the same time, reducing providers’ well-being by affecting their effective usage of time and resources. Third, the
value perceived by participants may change over time because the effects of resource integration can have long-term impacts on participants [9, 28]. The personal feelings experienced during the process of resource integration may differ from those experienced during the execution of the service or after its completion [9], making the process of co-destruction dynamic and changeable. For instance, users may be satisfied with the interactional process with service providers during the interactional process (e.g. co-production activities), but the effect of the service in the medium-long term may negatively affect their satisfaction.

**Public vs. Private sector**

The translation of the concept of co-destruction from the private service literature to the public service one must be conducted very carefully [19]. Despite many similarities at the operational level between public and private services, public services fail differently for four main reasons. First, few public organizations are likely to die after their failure because they are usually integrated with other organizations, while private ones are at high risk of closure and bankruptcy in the case of failure. Second, public organizations may be successful in shirking their market share because their percentage of total sales is not their main concern. For instance, the cancer screening programmes of the NHS succeed when the number of users of cancer services declines. Instead, the main objective of private organizations is to increase their market share because they usually work in a highly competitive scenario. Third, the users of public services are often forced to be beneficiaries even if dissatisfied, whereas consumers use services only if they are satisfied with them. Finally, recovery from public service failure is not as easy as that from the private one. In the public service environment, it is difficult to link failures and their effects. The public sector tends to address its attention to the community rather than the single citizen by treating users as a collective whole rather than as a group of individuals. In the case of service failure, it is more likely that the leader of the service organization resigns than the service organization refunds its users. Differently from the private sector, public service organizations have much more difficulties in implementing an effective recovery strategy [19].

**Co-destruction in the public sector**

Although investigation of the causes of co-destruction in the public service literature has garnered little attention in the past decade [36], there are some recent exceptions that are definitely worthy of mention. In what follows, we cluster the causes of value co-destruction that emerge from the literature in four groups. The first group comprises antecedents that limit the effectiveness of the 'interactional process' due to the lack of resources by consumers and/or providers. This group includes consumers the lack of technical information [16], knowledge of users’ needs and expectations [19], transparency and understanding of each other parties’ roles and responsibilities [15], trust [37] and public investment [25]. The second group of antecedents of co-destruction consists of limitations related to the context of analysis such as rigidities of the public service organizations [19]. The third group includes antecedents that facilitate the misalignment of resources among actors. Scholars have shown that an imbalance of knowledge, power, capabilities and resources among actors might be a cause of co-destruction [38]. The last group comprises antecedents that encourage misbehaviours in participants during and after the
interaction process. This group includes misbehaviour by participants such as corruption, infringement of privacy, discrimination [25], listlessness and denial [6, 19].

Almost all these studies address service failure besides investigating other topics, so that the findings are fragmented and hardly generalizable. But there are at least two authors who have investigated co-destruction empirically: Jarvi et al. [18] and Engen et al.[15].

Jarvi et al. identified eight causes of value co-destruction: absence of information, lack of trust, lack of clear expectations, inability to serve, inability to change, mistakes, customer misbehaviour and blaming that can occur before, during and after the collaboration process. The first cause, i.e. the absence of information, arises from the inability of providers and users to understand and share information. The second cause, i.e. insufficient level of trust, occurs when actors do not rely on each other. The third cause, i.e. lack of clear expectation, is determined by users’ inability to express their expectations clearly. The fourth cause, the inability to serve, arises from the incapacity of providers to achieve users’ expectations effectively and in time. The fifth cause, i.e. inability to change, refers to the incapacity of both providers and users to modify their routine activities and approaches according to new environments. The sixth cause, i.e. mistakes, arises from involuntary events such as the application of wrong assumptions or the purchase of wrong products. The seventh cause, i.e. customers misbehaviour, refers to the misuse of resources or the immoral acts of users. Finally, the last cause, i.e. blaming, arises from users complaining about the products or services [18].

Engen et al. proved that failure is usually caused by more than one action performed by more than one participants, making identification of the culprit very challenging [15]. Their research highlighted the necessity to analyse co-destruction by studying the interactions of the actors belonging to the service ecosystem, and it identified four reasons for co-destruction: inability to serve, mistakes, lack of bureaucratic competences and lack of transparency. The first two causes of co-destruction confirmed the part of the framework identified by Jarvi et al. in 2018. While, the other two causes arose from the adoption of a broader perspective that included service users and third parties. This proved the importance of investigating the causes of co-destruction by including the perspectives of all the actors in the service network.

Co-destruction with vulnerable actors

The literature is currently debating on how to involve vulnerable and marginalized actors in the co-production process [21]. To prevent equity issues, providers must involve all target users, even if their involvement may be challenging. The exclusion of one or more users’ segment will reduce the system’s capacity to respond adequately to the needs and expectations of all the target users. For instance, Pallier at al. highlighted the importance to involve ‘hard to reach’ users that are usually excluded from the co-production activities. Although they face several challenges in participating, i.e. long distances, cultural barriers and lack of confidence, their opinion is crucial for understanding how to modify and shape traditional urban practices in rural and remote areas [23].
However, the involvement of vulnerable and marginalized users may increase the risk of diverting a co-production process towards a co-destruction process [16]. The current literature identifies four main challenges that facilitate the failure of co-production with vulnerable and marginalized actors. First, the engagement of vulnerable users requires time and effort. Providers, and their organizations that decide to adopt co-production, should take account of a medium-long time for involving service users and a large number of resources [39]. Second, providers should build trustful relationships with vulnerable users. As highlighted by Pelletier et al., the lack of strong relationships among actors makes users feel abused by researchers, as they do not feel part of the research project [23]. Third, users should have all the abilities necessary to collaborate in partnership with providers, especially in the healthcare sectors where the disparity of competences, skills and knowledge between users and professionals is high [40, 41]. The lack of equal knowledge and information makes vulnerable users feel inferior and inadequate, reducing their willingness to participate in and contribute to co-production activities [42]. Finally, time, resources, trustful relationships and competences may still not be enough to prevent co-production failure. Providers may fail to address users’ expectations because they do not take account of ideas and opinions of vulnerable users that are not feasible in economic or organizational terms or do not fit with the aims and boundaries of the project [43]. The lack of consideration of users’ opinions makes them feel useless, as it seems that providers’ decisions have already been taken [44].

**Data And Methods**

We investigated the pitfalls of co-production process by using a case study methodology because it facilitates understanding of the interactions and exchanges among actors [8]. To answer our research question, we decided to test Jarvi et al. (2018)'s framework by collecting the perspectives of all the actors involved in the process of co-production, as suggested by Engen et al. (2020). Thus, we preferred to adopt a single explanatory holistic case study because the investigation of co-destruction aims at verifying the well-established framework of Jarvi et al., making the adoption of a single case sufficient [45].

**Case and context description**

Since the purpose of our research was to investigate the causes of a specific outcome, we chose a case in which we had great accessibility to the data [46]. We decided to investigate a project in which we are involved directly as project partners. Moreover, this research enabled us to reflect critically on the achievements of the project by looking at the pitfalls faced during its implementation. The project investigated is a longitudinal project launched to co-produce a new social and community service for the family caregivers of elderly citizens in a hard-to-reach valley in northern Italy, Valcamonica. The project is carried out by the Università Cattolica del Sacro Cuore, a local home care agency (ATSP), Politecnico di Milano University and the Need Institute and funded by Fondazione Cariplo. Additionally, four local assisted living facilities collaborate with this project [47].

This research is part of a larger study that aims at making a substantial contribution to the debate on the involvement of vulnerable actors in co-production activities. In particular, this research investigates the pitfalls of co-production that may arise during a specific phase of the service cycle: co-design [1, 48].
lens of analysis is complemented by studying the conducting methods and the type of interactions that occur during the process of co-production and facilitate its achievement. The three lens of analysis on this complex and debated process support practitioners in adopting co-production with vulnerable actors and academics in advancing researches in this field.

During the project, the ATSP and the researchers involved the family caregivers of older patients resident in Valcamonica in the co-design of a new public service for them. On the basis of results from co-productive workshops, the project team envisaged the new public service as comprising four activities: training programme, mutual-help meetings, citizen committee and project and services’ information. The training programme is a set of practical courses for family caregivers to elderly persons. The mutual help meetings are groups of family caregivers coordinated by a psychologist that share their feelings and fears with each other. The citizen committee is a group of family caregivers, researchers and ATSP representatives that was set up to support the implementation of the pilot. The project and services’ information consists of online and offline channels (i.e. Facebook page, Project website, brochure) created by the project team to spread awareness of the project and local services for the elderly. Despite the new service was designed according to caregivers’ expectations by valuing their contributions, the level of its innovativeness was medium-low. Indeed, almost all the project’s activities suggested by caregivers have already been experienced and studied in the existing literature[49]. Thus, the project implemented co-production successfully, but the results of the co-production process do not seem so interesting and innovative. This dichotomy of co-production proves the suitability of this project to our research question. Since now the project under investigation experienced both co-creation and co-destruction processes that co-existed and alternated one another over time. This consideration is confirmed also by the preliminary results of the service pilot:
The results of the co-productive project are unclear and ambiguous. Although on average the satisfaction of the pilot was high (i.e. above 85% on average), the number of meetings organized and the caregivers involved seemed quite low. The access and use of the channels for informing the local community about the project and the local services seemed also not satisfied. To achieve a satisfied number of activities and participants, the project team had to extend the pilot by two months in order to facilitate the ATSP, which was in charge of implementing the pilot, in organizing additional service activities. However, we should contextualize the findings within the field of the analysis, i.e. a remote and hard-to-reach valley. The logistic difficulties [50] and the “distrustful culture”[51] typical of such contexts might have influenced the participation rate. Thus, at present we cannot give an absolute judgement on the service pilot. The successful and unsuccessful results reveal that the interactional process among actors led to both co-creation and co-destruction processes. On the one hand, the project increased users’ well-being by

| Activities                  | Assessment Factors                               | Results                                      |
|-----------------------------|--------------------------------------------------|----------------------------------------------|
| Training programme          | Number of courses                                | 5 courses (+1 cancelled)                     |
|                             | Average number of participants per meeting        | 7 caregivers                                 |
|                             | Average % participants’ understanding of courses’ contents | 88%                                          |
|                             | Average % satisfaction of participants            | 98%                                          |
| Self-help meetings          | Number of meetings                               | 5 meetings (+2 cancelled)                    |
|                             | Number of participants per meeting                | 6 caregivers                                 |
|                             | Average % satisfaction of participants            | 86%                                          |
| Citizen committee           | Achievement of a set of pre-defined goals         | 28% achievement of the expected results      |
| Project and services’       | Number of “likes” on the project’s Facebook page | 59 likes                                     |
| information                 | Number of visits to the project website          | 130 visualizations                           |
|                             | Number of downloads of informative materials on the project website | 11 downloads                                 |
|                             | Number of new patients of ATSP informed through the project’s channels | 0                                             |
increasing family caregivers’ satisfaction. On the other hand, it failed to increase the well-being of the project team, because the time and resources invested did not balance the number of family caregivers reached with the service pilot.

On the basis of these considerations, we deem this project suitable for investigating our research questions for three main reasons. First, it reflects on the adoption of co-production with vulnerable and marginalized actors in the public sector. Second, the time horizon of analysis is medium-long facilitating the evaluation of co-production activities during the execution and beyond. Third, the involvement of users in the co-designed service yields both positive and negative effects, making the investigation of the driver of co-destruction interesting and important.

**Data collection**

In order to answer our research question, we used different methods for data collection by involving all the actors participating in the co-production activities. To understand the opinion of the ATSP, we used semi-structured interviews with three ATSP representatives responsible for implementation of the new service. To collect the perspectives of family caregivers, we organized two workshops with ATSP representatives, researchers and the family caregivers. Meanwhile, we adopted a reflexivity approach suggested by Bradbury et al. (2020) to gather our point of view as researchers [52].

| Table 2 | Data Inventory |
|---------|----------------|
| **Actors involved in the co-production activities** | ATSP representatives | Family caregivers | Project researchers |
| Methods of data collection | Semi-structured interviews | Assessment workshops | Reflexivity approach |
| Number of actors | 3 representatives | 2 workshops (one at the middle and one at the end of the pilot) involving: | 4 researchers |
| | | • 11 caregivers; | |
| | | • 2 researchers; | |
| | | • 3 ATSP representatives. | |

The interviews were designed according to the framework suggested by Jarvi et al. (2018). They aimed at investigating the effects of co-production during and after the co-design activities by highlighting the causes of service failures. Moreover, we collected general information about interviewees, by asking about their role in the project, their expectations before the project's launch and their general evaluation of the service. In particular, during interviews and workshops, we investigated the strengths and weaknesses of the project by focusing on the pro and cons of involving family caregivers in the design of new
services. Finally, we, as part of the research group, following the developmental reflexivity approach suggested by Bradbury et al. (2020), were involved in the reflections on co-destruction in order to provide suggestions on what we had learned in this project [52]. Bradbury et al. suggested involving researchers in this process in order to provide a personal and self-critical stance on our role.

Data analysis

The framework developed by Jarvi et al. (2018) was adopted, using a deductive approach (Boyatzis 1998). We started to analyse the records by referring to the eight causes of co-destruction: absence of information, insufficient level of trust, lack of clear expectations, inability to serve, inability to change, mistakes, customer misbehaviour and blaming, proposed by Jarvi et al. (2018)’s framework. Each interview and workshops was audio-recorded with the participant’s consent and analysed by investigating the occurrence of possible causes of co-destruction as suggested by Jarvi and sorted in a draft framework if these causes actually led to co-destruction or not. We analysed the perspectives of all actors of the service network that were involved both directly and indirectly in the service delivery, as suggested by Engen et al. (2020). In particular, we enriched the analysis by investigating the collaboration and the possible difficulties in the communication or roles identification within the research group, with family caregivers and with the other stakeholders of the service network. Reporting of this paper followed the Standards for Reporting Qualitative Research reporting guidelines [53].

Results

Based on Jarvi’s theoretical framework of analysis, there emerged from the interviews four main results that led to an ambivalent co-production process. The dimensions evoked from interviewees were related to 4 of the 7 causes identified by Jarvi: trust, mistakes and inability both to change and to serve. Moreover, following Engen’s approach, we also investigated the interaction of actors involved in co-production activities.

Insufficient level of trust

Lack of trust emerged as a powerful initial obstacle to co-production that influenced so many refusals to participate in the first stage of the project. Both caregivers and research team members affirmed that in the context of Valle Camonica it is still difficult to speak about health problems, difficulty of caregiving and to ask for help, both to friends and to local institutions.

“It is typical behaviour of this valley: people participate [in a new activity] only if they know [who is the organizer] or they have received the information by word of mouth” (research team member, male, 1).

The ATSP, even if it is a fully recognized institution in the context of Valle Camonica, had great difficulties in receiving the trust from caregivers to participate in the project. This could also have been related to a lack of knowledge about the benefits of the project, but caregivers who participated stated that the objectives and their role was clear from the first moment of the contact with the ATSP. The reason why
involved caregivers decided to participate and maintain their contribution to the project was that they received clarity of explanation and constant contacts and interest in their experience from the team project and especially with ATSP.

“The first time I was doubtful, what did they want from me? It was the first time. I was afraid that I would have to pay. But when I met …. Of the ATSP I changed my mind. He explained the project to me, my role and I was really happy to participate, even if I wasn’t sure of how I could actually help for the project”. (Caregiver, female, 8).

Lack of trust certainly influenced the participation of caregivers in the initial phase, but those who participated created a positive relationship with the ATSP and research team members that led to a successful co-production. For this dimension, we can see ambivalence of the co-production among people that had not been able, or the research team had not been sufficiently persuasive, to overtake the initial lack of trust.

Mistakes

From interviewees and workshops, two possible causes of co-creation emerged in the words of caregivers and research team members that could be associated with what Jarvi categorizes as mistakes.

The first one was related to the methods adopted to engage caregivers in some tasks of the coproduction. Some situations embarrassed caregivers who didn't feel able to help in this creative part of the project. Caregivers were not used to these processes that included creative tasks, and the research group was not able to engage caregivers more closely in these tasks, which were part of the co-production.

Another important aspect concerned the postponement of some events of education/training and support due to the low participation expected by the research team. The decision was taken to

not involve trainers for only a few people, considering that all of them came for free” (research team member, male, 1)

However, caregivers contested this decision by stating that “Even if there is low participation, we have to start with something, it is important, otherwise we'll never get started”. (caregiver, female, 4).

This claim highlights that caregivers felt not sufficiently involved in the decision and asked for explanations. It also shows that even if there were misunderstandings, the climate within the co-productive team was good because everyone felt at ease in explaining what they found wrong and asking for explanation, and more importantly, they were aware of the importance of participation in the project. This emerges clearly from interviewees:

“I absolutely understand the reasons why you cancelled some meetings, and I was not angry but sorry because I need these moments and I would have preferred few participants but maybe the possibility to
Inability to change

In line with Jarvi et al.’s framework, we confirmed that co-production can turn into a co-destruction process when both providers and users are not able to change to new ways of behaving and new contexts.

In regard to why many caregivers withdraw from participation in co-production workshops and piloting activities shortly beforehand, results revealed that caregivers find it difficult to leave their care receivers alone for four main reasons. First, caregivers usually cannot leave their care receivers alone at home, so that they must find a substitute both professionally trained and accepted by the care receiver. Second, caregivers usually feel responsible for and engaged in caring activities and do not trust any other person. Third, the distinctive culture of Valle Camonica often incentivize citizens to hide their family’s problems, which might reveal their personal weaknesses. Fourth, the ATSP as a service provider was unable to offer additional home service to encourage participation.

“Leave him (carereceiver) alone at home? It’s not possible, and also when the professional caregiver comes or the social worker, if I go away he starts to scream and cry. (Caregiver, female, 5).

“I understand you, and I also do not feel comfortable, my professional caregiver is not able to manage the feeding tube and so I am always worried” (Caregiver, male, 10)

“I would like to find a professional caregiver to have some relief and to participate in these events, but it is very expensive” (Caregiver, female, 2).

Is this an impossibility to change or an inability to change? Probably both: actually, when the social worker comes to the home, our caregivers can quickly go out to do some shopping or run errands, but only when they feel comfortable with the social worker (and often this is not the case). Moreover, it was not possible to provide a specific service for caregivers when involved in the project’s activities because this would have implied additional human and economic resources that were not accessible.

Inability to serve

We verified the inability to serve as a possible cause of co-destruction. In our case, this dimension arose from the providers’ inability to meet in the piloting phase the requests and decisions set during the co-production activities. The results of both interviews and assessment workshops revealed three main inefficiencies of the research team.

First, during the first assessment workshop that took place during the pilot scheme, caregivers complained about insufficient external information and communication, saying that in their opinion few people were informed about the project. Caregivers declared that many social workers and general practitioners were not informed about the project.
“My social worker came to my home and I asked her if there were any projects for caregivers in the valley, and she said no. But I was already participating in one, so she was not informed about the project. This is a problem that has to be solved” (Caregiver, female, 5).

After that claim, members of the ATSP went to practitioners’ conferences in the context of the valley and informed coordinators of social workers, but caregivers during the second assessment workshop still reported that information was not widespread. This has surely influenced the results on caregivers’ engagement and highlighted the difficulty of creating a cohesive partnership with actors outside the project but important in the healthcare and social system of the valley.

Second, caregivers complained about the inability of the project team to cooperate or at least coordinate the proposed service with similar services for family caregivers in the valley. The research team contacted another service present in the valley for psychological support, but it was not possible to create a partnership with it, due to problems of programming activities and responsibilities but, more importantly, for a lack of collaboration that was an important issue in the valley. As a result, some overlaps with the other local service occurred, possibly reducing the number of participants in the service's activities.

“I usually go to the support group for caregivers of patients with dementia, and they didn’t know about the project. I think it is important to connect different initiatives that all together can reach all caregivers” (Caregiver, female, 9).

Finally, caregivers suggested using local mass media to disseminate information about the project. This was done, but in a weak format (some interviews and short news items in local newspapers). As stated by the ATSP, requested fees for iterative publications and investments on marketing campaign have been particularly expensive, and this was not forecasted as this service was intended for free and not as a commercial service.

“I was a little bit disappointed by local journalists because they asked for a fee like it was a normal commercial spot?. This is a free service to our people!” (research team member, male 1).

The difficulty of creating a cohesive partnership

By looking at this initial results, we also wanted to understand if difficulties in co-production were related with problems of coordination inside the research group. This led us to reflect on collaborative dimension in the project. Actually, the actors of co-production were caregivers, ATSP representatives, researchers, while the eco systems involved included nursing homes, social workers and local communities.

According to our perspective, some failures in the co-creation process were due to the non-cohesiveness of the network of actors, which turned out to be a bidirectional relationship between the ATSP and universities.

Caregivers, social workers, local communities were left outside. In our interviews, when exploring possible causes of negative results, the focus was always on the relationship between ATSP and universities, and not on the relationship with caregivers. Many explanations might be possible: one consists in the lack of
trust in involving caregivers, as previously discussed, another in some errors made before and during the collaborative phase. Before, the lack of alignment between Universities and ATSP on the nature of coproducing activities. During, a set of managerial tools and way of working that researchers were used to adopt, while local service providers usually not.

Interviews evidenced difficulties of collaboration and coordination within the research team. Firstly, ATSP lamented different expectations about each role and especially related to the coordination as for example with time schedule of the different phases of the project. This emerged clearly in the interviews:

“There is a difference in style of working between universities and local service providers. Universities are more flexible, giving more autonomy to partners to achieve their results. We (the local home care agency) need more supervision, someone that clearly says what we have to do and in what times” (research team member, female, 1).

This reflection has been shared inside the research group: usually universities tend to give full autonomy to each coordinator of a working package and a close supervision would be an act of intrusion or lack of trust by the other partners. Different organizational cultures led to this difficulty that, unfortunately, created less cohesion inside the research group [54] and created misunderstandings in the co-production process.

Secondly, the meeting style had an impact on the discussion of problems and possibilities to manage difficulties.

“We (ATSP) are not used to making rapid skype or conference calls, I was not comfortable in explaining difficulties and problems about the piloting” (research member, male, 1).

“We usually have a weekly meeting, not long, but just to share news and difficulties within each project. We missed that part, we need constant feedback. (research member, female, 1).

Conclusions

This paper responds to calls for studies on co-destruction of service failure in the public service literature [6, 7, 15, 18, 20] when dealing with vulnerable, hard-to-reach communities. In particular, it has aimed to clarify the unrealistic optimistic view of co-production and encourage new opportunities for its re-enchantment. In this context, with an analysis of a concrete research project for the co-production of a support service for family caregivers living in the rural context of Vallecamonica, we have sought to understand difficulties that we experienced since now in this project, trying to understand if co-production led to co-destruction in this case. We explored the theoretical framework of Jarvi et al. with interviews and assessment workshops with the representatives of the local home care agency and caregivers that had participated in the co-production workshops and we joined the critical thinking as part of the research group responsible of co-production. In answer to our research question, there are several conclusions that we want to highlight.
Firstly, related to the participants in the co-production, it is important to underline that this was a path-breaking study that involved vulnerable caregivers who had never participated in this kind of research before. At this stage of the study, we can highlight pro and cons of this engagement in order to explore better this kind of engagement in future projects. A context that is quite closed minded and do not trust university knowledge has heavily influenced the co-production, because many caregivers declined our invitation, and had also some consequences for universities. We acknowledged that necessary is serious reflection on expectations and tools to use for an effective co-production with vulnerable people. This project hadn’t as principal objective to produce bridging social capital [55] but it seems that a possible solution could have been to produce social interactions among caregivers before and also outside the project in order to create trust among each other and to feel more comfortable speaking about their problems. These social relations could go under the umbrella term of ‘conviviality’ [56] an orientation to share experiences, values and attitudes through differences that can lead also to the creation of information sharing and mutual help [55]. Conviviality is not a synonym for community, usually associated with strong and heavy relationships, but may be a more ephemeral form of interaction characteristic of the modern city, enabling the construction of “connective interdependencies” that are coherent with the “networked individualism” that enables individuals to meet a variety of needs through sociality [57]. Practices of conviviality become spaces for social bonds to be formed, and this could strengthen co-production and co-design processes.

However, it would be ungenerous to say that we experienced co-destruction. Caregivers that decided to start participating in the project were very pleased with their active role and the new service, and the assessment of services activities revealed that they were useful and interesting for participants (e.g. satisfaction and understanding of courses’ contents rates).

Second, universities and providers still have different organisational cultures and in a co-production regime this could lead to incoherent strategies and practices. Collaborative projects, like our co-production, require forms of mutual adaption that can help create coherent and efficient practices even in challenging and shifting scenarios. Incoherence could be erroneously perceived as a low interest in dealing with the problems experienced by the population and this could deal to a mistrust. Our experience showed that incoherence might turn out to be a factor of co-destruction, but that it might be faced with thorough work on roles, competence and boundaries.

Third, in our research we saw that the two dynamic processes (co-creation and co-destruction) coexist [17]. Caregivers were involved in and contributed to the new services, but in some cases their scepticism inhibited their active involvement. We need more empirical studies in remote and challenging scenarios and with vulnerable populations in order to identify better solutions for critical issues. Moreover, it is important to strengthen a beneficial link between universities and providers in order to be more effective towards, and with, vulnerable people. In this case, it could be particularly important to foster funding for research projects aiming at collaboration between these two actors.
The most important lesson that we draw from this project is that co-production with caregivers has to take serious account of the evolving condition of caregivers and care receivers, as this could heavily influence their willingness or ability to participate in the overall co-production process. Moreover, methodologies and tools of co-production have to be shared with the entire research group and not only between members that are already experts in co-productive and engagement processes.

In this study, we have identified two principal limitations. Firstly, we were not able to reach caregivers that participated in initial workshops but later did not show up at events. It was particularly difficult to access these caregivers who abandoned the project due to their isolation and reluctance to speak with institutions and universities. We still do not know if they did not participate for lack of interest, lack of time, or the death of their care receiver. On our side, we properly informed every caregiver about the importance of participating at every workshops for the assessment of the project.

Secondly, to assess possible pitfalls of co-production, we interviewed caregivers twice, but research team members once. Caregivers, in the first round of interviews/workshops had a crucial role in modifying and re-thinking some services. Probably, an intermediate round of interviews with research team members would have highlighted prior problems in creating a cohesive partnership. We think that it should be better to devise an assessment plan of the co-production at different stages of the co-production process and involving all the actors. Only in this way can the dark side of co-production be discovered and fixed.

Declarations

Declarations and Competing interests

This study is part of the Place4Carers project funded by Fondazione Cariplo. The authors declare that they have no competing interests.

Availability of data and materials

Not applicable.

Ethics approval and consent to participate

The Ethical Committee of the Catholic University and of Polythecnic of Milan have approved the protocol of involvement of caregivers. Caregivers signed an approval for the participation to the research and in specific to collaborative workshops. Participants at the project had signed a consent to participate in the research proposal.

Consent for publication
Not applicable.

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**Authors’ contributions**

EG and CM built the scientific background on co-production and co-destruction that led to workshops and interviews and to this article. NM and GG built the scheme of the collaborative workshops with caregivers. NM and EG built the scheme of semi-structured interviews with research members and led interviews and collaborative workshops. NM analysed collaborative workshops and interviews and structured the results part. All the authors contributed in the discussion part.

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