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Intermediation in design as a practice of institutioning and commoning

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Design practices often involve grassroots communities and institutional actors with designers working as or with intermediaries. This paper defines intermediation as a significant design practice, especially when designers engage in commoning and institutioning—concepts that have gained traction in recent discourses in design scholarship. To discuss intermediation, the paper introduces two case studies: a community radio project in Europe and a food supply chain project between Australia and China. The two cases show implicit and explicit ways that intermediation can form an integral part of the practices and competences of designers. The paper discusses the merits of intermediation skills and techniques as well as how intermediation can be better embedded and integrated in design practices.

Keywords: collaborative design, design practice, interdisciplinarity, intermediation, participatory design, codesign

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A growing number of design researchers engage with communities of various sorts, reflecting on the practices and methods necessary to support communities in their own development. This discourse traverses a wide spectrum of research in interaction design and participatory design, and opens up new research directions rooted in the understanding of the relations between people, communities, institutions, and commoning practices (Bollier & Helfrich, 2019). In this paper, we position ourselves in the aforementioned design research debates, focusing on one specific set of practices that has attracted recent attention but whose comprehension and

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systematisation are still underdeveloped in design studies, that is, the role of intermediaries and the contribution of intermediation practices for design.

The premise of our work stands with the descriptions of working with communities as elaborated by Kuznetsov et al. (2011) and DiSalvo, Clement, and Pipek (2013) who have pointed out how design researchers, when engaging with communities, are engaging with groups of people tied together by different elements: (1) sharing the same geographic location, as in communities of place (Foth, 2003, pp. 31–39); (2) sharing the same concerns, as in communities of interest (Fischer, 2001); (3) sharing the same practices, as in communities of practice (Wenger, 1998, 2000), or; (4) sharing the same position of relative autonomy in relation to constituted powers, as in grassroots or civic communities (Foth, Tomitsch, Satchell, & Haeusler, 2015; Kuznetsov et al., 2011). As it appears evident, these distinctions are not mutually exclusive, as it is possible to detect communities of interests that are also geographically collocated, grassroots communities of practices, etc. What is common across design projects engaging with people and communities is often the goal—either implicit or explicit—of strengthening the relations between designers and participants involved and their capacity to shape the world that surrounds them (Hendriks, Huybrechts, Slegers, & Wilkinson, 2018; Smith & Iversen, 2018). From this perspective, this article contributes a discussion of intermediation as a specific set of skills and techniques needed to advance the interests of the communities designers work with—and doing so in a world not necessarily aligned with the community's interests. Although related to classical concerns on reflexivity in participatory design and co-design, intermediation differs in that rather than attempting to build a space for participant engagement, intermediation itself takes on the role of actively representing specific interests in the community–institution dynamic.

Many lenses have been adopted to discuss communities' own empowerment. For example, the general focus on social innovation (Britton, 2017) stresses the outcome, in terms of social good, of design and innovation practices. Other approaches, like the ones inspired by feminism (Bardzell, 2010; Sciannamblo, Lyle, & Teli, 2018, 2021), have looked at a theoretical language connected with historically relevant social movements as a way of increasing the capacity of design researchers to contribute to processes of empowerment. Another focus has been on how design research and practices can actually support the formation of publics, groups of people concerned with specific social issues and taking action (Foth, Tomitsch, et al., 2015; Le Dantec, 2016; Matthews, Doherty, Johnston, & Foth, 2022; Teli, Bordin, Menéndez Blanco, Orabona, & De Angeli, 2015). These examples clarify how design researchers working with communities have questioned their theories, their alignment with activist agendas, the way design practices could support the relations between concerned people, and the evaluation of outcomes.

To discuss the role of intermediation in design research, the paper is structured as follows. First, we introduce prior work relating to the concepts of commoning and institutioning, showing how those concepts open up the space for a discussion of intermediation (Section 1.1). Second, we discuss the concept of intermediation itself, drawing upon literature in design research as well as the social sciences (Section 1.2). Third, our approach (Section 2) comprises a presentation of some empirical findings of two case studies, one in Europe (Section 3) and one between Australia and China (Section 4), which exemplify the relevance of intermediation for design research. Finally, in Section 5 we discuss how intermediation can be integrated in the repertoire of design research, advancing knowledge and practice of working with communities.

1 Prior work

1.1 Institutioning and commoning

Two recent verbifications, institutioning and commoning, have shed light on how design processes done with and by communities can strengthen the relations among people and their capacity to shape the world. Compared with other recent work, for example the one on agonism in infrastructuring (Björgvinsson, Ehn, & Hillgren, 2010, 2012; Hillgren, Seravalli, & Emilson, 2011), the focus of institutioning and commoning is not only on finding appropriate ways of dealing with participation involving exclusion and inclusion mechanisms but on the relationship between human agency and institutional actors. It is also on (i) identifying new ways that the design process can shape the relationship and engagement with institutions themselves, and; (ii) how material resources and social organisations can be re-imagined and managed as commons before, during, and after a design project.

Institutioning, introduced by Huybrechts, Benesch, and Geib (2017), points to the way design processes relate to existing, or new, institutions, identifying what Castell (2016) calls "institutional frames:" (i) the *metacultural frame*, describing the culturally defined goals of institutions, as democracy, sustainability, etc.; (ii) the *institutional action frame*, describing how institutions can act as organisations, e.g. privileging participation and dialogue, and; (iii) the *policy frame*, referring to how institutions are defined in the concrete manifestations of their actions, as policy documents, guidelines, etc (Huybrechts et al., 2017, p. 151). Within this language, institutioning refers to the process of mutual shaping between design processes and institutional frames. Therefore, with an institutioning lens, we can look at (a) how designers and communities are either constrained or propelled by institutions, and (b) how they can interact and engage with them.

Commoning has been discussed significantly in participatory design, beginning with the work of Marttila, Botero, and Saad-Sulonen (2014) and

Seravalli (2014), who have elaborated on how participatory design can engage with the theoretical apparatus on commons provided by Elinor Ostrom (1990). In Ostrom's work, the commons are forms of collective governance of resources that do not entail private or state control and the verbification *commoning*, inspired by historian Linebaugh (2009), refers to the practices of establishing and maintaining commons. De Angelis (2019) has clarified how commons entail something to be managed collectively (the commons), the people actually managing the commons (commoners), and the practices of collective management (commoning). Taking a commoning perspective, we emphasise the situated practices enacted when building democratic forms of collective ownership. Those practices are therefore aiming at shifting away from the dominant forms of resource management and production processes—private property and state hierarchy.

In this paper, we align ourselves with recent efforts at combining institutioning and commoning. In particular, Foth and Turner (2019) articulate what is the relation between the different scales of design practices and how they can include institutioning and commoning as ways of thinking about the local and the global scale at the same time. Teli, Lyle, and Sciannamblo (2018) argue for comparative approaches when studying institutioning across different contexts. Relying on Huybrechts et al. (2017) and Lodato and DiSalvo, Cibin, Teli, and Robinson (2019) (2018) show how the actions available to designers are constrained by the institutional frames at play in different countries.

Expanding on this reasoning, Teli, Foth, Sciannamblo, Anastasiu, and Lyle (2020) draws upon the consolidated language of strategies and tactics (Bødker, Korsgaard, Lyle, & Saad-Sulonen, 2016; Lyle, Sciannamblo, Teli, & Infrastructuring Autonomous Social Collaboration. Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems 1–12, 2018) to sketch out a framework to interpret the power dynamics at play when grassroots communities and institutions are relevant actors in design processes. They discuss how, in different moments during a design process, designers' actions respond to the strategy of the grassroots or of the institutions, and they refine the language supporting design researchers' reflections. Moreover, they refer to the processes in which designers are involved, as: (1) *cooptation*, when the strategic initiative is the one of institutional actors trying to bring design practices on their side; (2) *publics formation* (Le Dantec, 2016; Matthews et al., 2022; Teli et al., 2015), when designers are strategically reaching out to grassroots communities, trying to involve them in design processes; (3) *entanglements* (Sciannamblo et al., 2018), when designers align themselves with the strategies of grassroots communities already engaged in establishing and maintaining commons, and; (4) *intermediation*, when designers try, strategically, to promote social change through both participatory and institutional processes and frameworks (Cibin et al., 2020; Smith & Iversen, 2018).

1.2 Intermediaries and intermediation practice

In this paper, we focus on intermediation as a situated practice of institutioning, in particular when the perspective of the design researchers is the one looking at going beyond contemporary capitalism (Avram et al., 2019) towards the commons (Teli, 2015). While there are prior explorations of intermediation in interaction design, e.g. the role of theatre (Newell, Morgan, Gregor, & Carmichael, 2006) or boundary objects (Foth, Lankester, & Hughes, 2018; Kimble, Grenier, & Goglio-Primard, 2010), we use the work by Teli et al. (2020) as our point of departure. They introduce intermediation together with the aforementioned notions of cooptation, publics formation, and entanglement. They refer to intermediation as the set of practices involved when "Designers seek to embed participatory design processes and their emancipatory ethos within institutions," and that entails to "expand the participatory design repertoire to more explicitly embrace the communication, sensemaking, dot-joining, frame-shifting, advocacy, and diplomacy skills and capabilities required to reconcile the interface between the institutional action frame and the participatory design frame" (p. 163). In design research, this has not been the only contribution to the study of intermediation where grassroots communities are involved. For example, Cibin et al. (2020) have shown how intermediaries—here: social actors different from the designers—are needed to intermediate between the design researchers and the grassroots communities, and that the possibility for meaningful contributions by intermediaries can be taken into consideration when organising a design intervention. Suggesting that intermediation may be a useful yet often overlooked practice in design research, these two examples illustrate two complementary perspectives: one in which the designers are themselves intermediaries, the other in which allies are intermediaries. To deepen our understanding of intermediation as part of design processes, we need to also study fields outside of design—such as cultural studies, arts management, and creative industries—to grasp and learn how design researchers can become better intermediaries, lead intermediation, and/or work together with intermediaries. As design practices are often reflective (e.g., Leal, de, Strohmayer, & Krüger, 2021; Light, 2018; Pihkala & Karasti, 2016; Simonsen & Robertson, 2012), we consider intermediation not only a reflective practice but—more importantly—as the specific subset of practices through which designer aim at advancing the interest and agenda of the communities they work with in transforming institutions towards more communal forms of management. For this reason, we rely on the work done in the social sciences that can help frame intermediation practices in contemporary society, to later discuss intermediation in the specifics of design research that we have described above.

The notion of cultural intermediaries is grounded in Pierre Bourdieu's (1984) "Distinction: A Social Critique of the Judgement of Taste." In his discussion of the creative and cultural economy (CCE), Virani (2019) observes that "the

notion that the creative and the cultural have become permeated by the economic and that the economic is inherently creative and cultural has become accepted by social scientists, policy makers, industry, government, entrepreneurs, and more" (p. 3). Virani goes on to identify three types of intermediaries: (a) knowledge intermediaries, such as those in the university sector, "whose primary role is the facilitation of knowledge exchange in order to bring universities and industry closer" (p. 5); (b) cultural intermediaries, that are "embedded within a sociological discourse" (p. 5), such as those identified by Perry, Smith, and Warren (2015) who see their remit as social change and/or contributing to community wellbeing, and; (c) creative intermediaries who facilitate "collaborations and connections within the CCE and oftentimes between sectors outside of the CCE through a process of mediation" (p. 6). Although the designer as intermediary might manifest attributes from each of these types, in this paper we focus on the designer as a cultural intermediary.

Bourdieu (1984) having set the tone, others (e.g., Durrer & Miles, 2009) have tended to critique the role of cultural intermediaries as manipulators of desire and agents of capitalism. More recent research has identified "a third wave" of intermediation done in the public interest that examines socially engaged practices and non-economic values and that seeks "to re-appropriate the terminology of 'cultural intermediaries' to draw attention to those working in liminal spaces between professionalised and everyday cultural ecologies" (Perry et al., 2015, p. 726). Both Perry et al. (2015) and Conlin (2015) discuss intermediaries as having a common focussed commitment to both social justice, inclusion, and the contribution of such work to communities' own empowerment. Nevertheless, most discourse stops short of exploring the potential agency of intermediaries as connectors of other value systems. Identifying such a role of intermediation for designers, we aim at enabling a two-way discourse between institutioning and commoning in design practice.

Human intermediaries are almost always identified not as intermediaries per se but first and foremost by their specific occupation or profession such as community artists, animateurs, and facilitators (Conlin, 2015; Foth, 2006; Perry et al., 2015; Teli et al., 2020; Virani, 2019). It appears designers are often natural intermediaries, yet few would refer to themselves by that term or even explicitly acknowledge possessing intermediation skills that are often tacitly held. For example, Louridas (1999) describes design as engaging in the curation of bricolage that intermediates between art and science. Cibin et al. (2020) explore the role of intermediaries in design projects and the contribution of designers in intermediating between a diversity of project participants. Palmieri, Huybrechts, and Devisch (2021) examine how a dialogical approach to participatory design informed by anthropology can assist designers in making sense and intermediate across the complex politics of sustainable futures. As such, the term 'intermediary' largely remains a taxonomic bracket around an untidy field, and we propose intermediation as a specific design skill set that

can be developed and taught. By doing so, we aim at re-conceptualising intermediation as a primary competence in its own right rather than as a loosely constructed corral around an eclectic grouping of other occupations or design practices, as reflexivity or infrastructuring agonism.

2 *Approach*

In this paper, we do not aim at comparative analyses, but we rely on two case studies, in themselves methodologically coherent, as illustrative of the way intermediation happened in two different design projects, one in Europe, one across Australia and China. This approach is not new in design research (Light & Miskelly, 2019; Teli et al., 2020), and here it is used to help us unpack intermediation aspects relating to commoning and institutioning. The two case studies are both based on qualitative methodologies and action research, and they have been discussed at length in previous publications (Bidwell, Cibin, Linehan, Maye, & Robinson, 2021; Cibin et al., 2021; McQueenie, 2021; McQueenie, Foth, Powell, & Hearn, 2021; Robinson et al., 2021). To provide adequate context, here we provide a summary of the research methods used.

CR project was a project aimed at the co-design of a technology to support the easy creation and management of community radio stations in isolated areas of Eastern Europe. Two of the authors, with a background in participatory and interaction design, took part in different parts of the project focusing on co-designing the features aimed at opening up the governance of the radio stations (Section 3). The two authors share a commitment to address the distortions caused by platform capitalism on the lives of communities and people. The role of the two authors in the project was to facilitate interaction between project partners (developers and NGOs) and the communities involved to design innovative solutions that would enable the governance of radio stations based on commons-inspired models. One of the authors in particular was involved in a continuous dialogue with two NGOs, partners of the project, working in the field with the interested communities. Thanks to this collaboration, data from different sources have been collected: three interviews held by one of the authors with members of the participating NGOs, with the goal of better understanding the socio-technical dynamics taking place during the development of the project in the community; material produced by the NGOs themselves during their field activities, such as a report with basic information about the community collected by interviewing many of its members, and field notes. In addition, internal project documentation such as minutes of project meetings, emails within the consortium, and project reports are part of the empirical material. We analysed this material through thematic analysis (Braun & Clarke, 2006), focusing on the role of intermediation practices in the design process. This process was based on several re-readings of the data by one of the paper's authors in order to codify them. Subsequently, the codes were grouped by themes in discussion with the other authors of the paper.

Finally, the main findings were reported also in consideration of the analysed literature. Four main themes have been identified, focusing on the role of intermediation in relation to: the diplomacy with existing institutions; the necessity of building trust in the commons; the need of making the commons attractive; the sustainability of the process, both offering support to the commoners themselves and providing continuity beyond the initial project funding. For reasons of space, in this article we focus only on the activities carried out with one of the communities involved in the project.

The BeefLegends project (Section 4) was designed as an industry and business-facing design inquiry. Practice-based and led participatory research afforded examples of the role of the embedded intermediary in context and provided a rich source of data in terms of procedural detail and operational issues. In addition to desk research, data was also collected from extensive and intensive fieldwork trips to local producer and consumer communities in regional Australia and metropolitan China in 2018 and 2019. This data collection entailed semi-structured interviews with individual food producers and consumers, school students and teachers, business people, representatives of statutory authorities and government agencies. It also comprised gathering and analysing film, video, and social media content (professional as well as community-generated), several volumes of field notes and correspondence (digital and analogue), recorded co-design workshops, surveys, and reports. The data enabled an in-depth analysis of the practical and operational aspects of the project as well as a more reflexive consideration of the underlying ontology (McQueenie, 2021).

For the purposes of this paper, we present the empirical findings that highlight the way intermediation has been part of both projects, CRproject and BeefLegends. The two projects exemplify intermediation in two different ways: in CRproject the intermediaries were project partners different from the design team, while in BeefLegends intermediation has been a practice directly part of the design researchers' skills and actions.

3 *CR project*

CR project was an EU-funded project involving eight partners: two academic research centres, two human rights NGOs, two digital technology companies, a local development organisation, and an international community radio association. The project revolved around CR platform, a set of open-source hardware and software that enables the creation of low-cost community radio stations while widening the range of people who can produce content (Vashistha, Cutrell, Borriello, & Thies, 2015).

The aim of CR project was to support the creation of community radio stations in isolated rural areas, usually cut off from mainstream information

circuits. This in turn increases media pluralism, public deliberation, community empowerment and the inclusion of underrepresented groups in the public debate. Community radio (Cibin et al., 2019; Hartley, Hearn, Tacchi, & Foth, 2003; Tacchi, 2002) can become a commons—according to the definition by De Angelis (2019), including a resource to be managed (the radio), people managing it (the community), and a specific set of collaborative practices. The design project and the technology affordances were directly aiming at the latter, by fostering the cooperation of the whole community in the ownership, governance and management of the station, and by supporting transparent decision-making processes.

The project started in 2018 and ended in December 2020. Four community radio stations have been created, equally distributed between Ireland and Romania, and are still active. In this paper we focus only on the case of a Romanian station, referring to other contributions for more details (Bidwell, Cibin, Linehan, Maye, & Robinson, 2021; Cibin et al., 2021; Robinson et al., 2021). The creation of the stations in Romania was based on the fieldwork of Rom1 and Rom2, two watchdog NGOs specialised in investigative journalism and human rights. They identified RuralTown, on the Danube delta (Figure 1), where a community of about 600 people live mainly on fishing and tourism during the summer. The lack of stable and well-paid jobs, higher education opportunities, and development policies has led many young people to leave the area and to the consequent ageing of the local population.

The two Bucharest-based NGOs travelled to the area to involve members of the community in the project. Together with community members, they set up the station and created broadcast content, and these two organisations worked as intermediaries between community members and the other project partners. In fact, the two Romanian NGOs facilitated the discussion between the RuralTown local community and all the other local, national, and supranational actors, institutions, and organisations that had to be aligned to start the community radio station. In particular, the two NGOs show how the intermediation they conducted entailed: diplomacy with existing institutions; the necessity of building trust in the commons; the need of making the commons attractive; ensuring sustainability of the process, both in terms of supporting the commoners themselves and providing continuity beyond the initial project funding. These themes are now discussed in turn.

3.1 The diplomacy with the institutions

First, Rom1 and Rom2's intermediation activity is evident in their work related to obtaining a broadcasting licence required by the regulatory framework. This involved interaction with the National Audiovisual Council (CNA) and the National Authority for Management and Regulation in

Figure 1 RuralTown's people live mainly on fishing and tourism during the summer. Source*: authors*

Communications of Romania (ANCOM), which regulates and manages competitions in the communications market. The licence was granted in June 2018.

> *There is a lot of scepticism, they [RuralTown Public Administration] have been sceptical at the beginning, and it was only because Rom2 was more entrepreneurial than us [Rom1], Rom1 was very polite, we are not very polite usually you know? When we fight things for human rights. Rom2 pushed with the mayor to help us because he hadn't shown any interest. He wasn't stopping things but he wasn't supportive. He didn't give a space for putting the antenna, you know, it was very slow, also the paperwork, everything*. [Rom1 member]

In addition, identifying the antenna site involved continuous negotiations with local institutions, with the risk of having to follow bureaucratic processes that could take up to a year. Finally, as we can see from the previous quotation, Rom2's specific attitude to intermediation allowed the situation to be unblocked. After negotiations with the mayor and the local council, an easier solution was found. It was possible to obtain permission to mount the antenna on the premises of the water pump station (Figure 2), owned by the local council.

Figure 2 Mounting the radio antenna in RuralTown. Source*: authors*

3.2 Supporting a new trust in the commons

Before setting up the radio station and starting a dialogue with the community, Rom1 and Rom2 carried out a series of interviews and a survey with RuralTown inhabitants. In particular, the purpose of this initial research was twofold: identifying challenges in designing and setting up the community radio station, and describing group characteristics of the community focusing also on their media habits.

> *In general, associations are not a tradition in our community. This situation has roots in communism when association was an obligation. We have a fishermen association that works. We have tried tourism, but it did not work.* [RuralTown's mayor]

> *People are not willing to do things on a voluntary basis. I'm sorry to say that.* [community member #1]

As we can see from these quotations, the results of this preliminary research showed potential issues related to a lack of interest in voluntary work and participation in the community. While this could apply to many community-oriented design projects, for this commons-oriented one it is a vital concern, as many commons initiatives (including community radios) do not rely extensively on traditional job relations that are typical of private property or state management. The two NGOs worked hard to involve community members in the project. They visited RuralTown, where the initial work of setting up the station began, and organised various meetings. The goal was to explain the project and the technology and conduct various interviews to learn more about community members and their relationship with the media and community participation. During these trips, the two NGOs managed to find some volunteers interested in collaborating and started to collect ideas about the contents to be broadcast.

3.3 The need to make the commons attractive

One of the peculiarities in the design of a community radio station concerns the need to think also about ways to attract listeners. This is essential for this service to be known by a critical mass of people who can make the station sustainable over time, from a social, institutional, and financial perspective.

> *We want to increase the attractivity of the radio using programs from other producers. We want to import other programs. Because we want to bring people to radio first, and after that to build a real community radio. […] Because we have no partners now. We have broadcast but no partners, no listeners. Why? Because we are not so good? Nooo! Because they don't listen to the radio. Let's give them radio, commercial radio with partnered programs, and let's bring them to listen, and then we will use this opportunity to discuss the community problems.* [Rom2 member 1]

Rom1 and Rom2's intermediation role can also be seen in their ability to use their network to increase the interest around the station. To reach the goal of creating a community radio, the use of commercial tools seems necessary. The low level of radio consumption by the local community pushed the two NGOs to support the volunteers by allocating part of the schedule on rebroadcasting programs from other stations that could not be received otherwise. This solution had two aims: (i) fill the schedule (at the early stage, when there were not many programs yet), which—due to the commercial licence—required 24/7 broadcasts, and; (ii) attract listeners by offering professional programs. For this reason, Rom1 and Rom2 used their social connections to obtain permission from Radio France International and Europa FM to rebroadcast some of their programs. In a commons-oriented project like CRproject, attraction and popularity are key to proactively engage commoners in order for them to see

the community radio as something that is worth investing the voluntary work needed to run it.

3.4 Intermediation and support of the commoners

Rom1 and Rom2 encountered various difficulties in the attempt to identify with the community the best solution regarding the governance, management, and ownership of the radio station. The three years of the project have been a short period to work on this, and the advent of COVID-19 slowed down this process even more. Community involvement in station activities and listening has definitely increased after Gina, the local community nurse, expressed her interest in the project in August 2019. Gina soon became the local field reporter, using her smartphone to produce materials recorded with the locals on various topics: greetings, shared memories, cooking recipes, old songs, long interviews, their views on issues affecting community life and local government.

Gina worked hard to promote the radio in the community and engage new volunteers, collecting listeners' feedback, and she was responsible for launching the station's Facebook page. Facebook posts included daily pictures of the place, photos with memories of locals she meets during her visits, calls to the community, and announcements to recruit volunteers to participate in the program's broadcasts.

> *We didn't find a team that can take all the responsibility for these stations. For example in RuralTown we have Gina, after the election, she changed her position, a weaker position. She was a candidate for becoming mayor and she lost. After this, she stopped her political activity but the community (and the mayor) does not consider her decision very good.* [Rom2 member 2]

A design project aimed at involving a local community in the creation of a commons such as a community radio will inevitably have to deal with controversies, also from an institutional perspective. In a rural context of few inhabitants, often few people, like Gina, find themselves engaged in different activities. This makes them more visible and subject to criticism. In the above quote, we see how Rom1 and Rom2 must also work on finding solutions that can help settle these disputes by acting as guarantors for the commoners. With this last concept, we intend to emphasise how, in the initial stages of the birth and growth of a commons, an intermediary figure outside the internal dynamics of the community can be crucial in overcoming frictions between community actors—frictions and contrasts that could otherwise lead to the paralysis or termination of the project.

There was another situation when the local elections influenced the development of the project. During the fieldwork, Rom1 and Rom2 realised another

Figure 3 Preparing the devices (with the radio stickers) for distribution to the community. Source*: authors*

problem that could limit the spread of the radio station: many RuralTown inhabitants, especially the older ones, did not have reliable FM receivers. For this reason, thanks to the idea of a project partner, Rom1 and Rom2 decided to spend part of the project budget on the purchase of cheap radios to be distributed to the population (Figure 3). In the case of a commons-oriented project with institutional backing (an EU grant in this case), supporting commoners and intermediaries can pass by addressing directly the material conditions that can allow for the flourishing of commoning practices.

Coincidentally, the distribution of the radios began during the election campaign period.

> *Many people ask what party the radio station is affiliated with. Because they thought somebody from some parties offered them the radio. Some of them—only some of them. But they have no involvement in the election with this situation, so we stopped the distribution.* [Rom2 member 1]

The distribution of radio devices, an initiative aimed at removing barriers that prevented part of the community from listening to the radio, had to interact with political and institutional dynamics such as local government elections.

Finally, the support provided by the intermediation of Rom1 and Rom2 was not only limited to the initial definition of the governance and to increasing the community's interest in the commons. In fact, they helped to build the preconditions to make that commons institutionally sustainable over time. During the project, Rom1 and Rom2 envisaged a local NGO to be created by community members, which would take over the radio station's complete ownership and management. However, although the elections were over, the local community was still politically polarised. In addition, it has not yet been possible to organise a group of local people to acquire all the technical know-how that would allow the independent management of a radio station obliged to broadcast 24/7 by its commercial licence. Furthermore, this issue was not only related to the governance of the station but also to the ownership of the licence to broadcast. In fact, with the end of the project it became necessary to pass the licence from CRplatformOrg (the company that owns CRplatform) to an organisation closer to the community. This was also because CRplatformOrg could not collect donations, a fundamental source of income for a community radio station.

> *We had an idea that we [Rom2] discussed with Rom1: we give to Rom2 the responsibility for the station, and to make a branch of Rom2 in the community. We won't do a new NGO, we don't have time for this. And time is a problem. The branch of Rom2 can have people in charge to manage the station and to manage a team there. […] The volunteers discussed this solution: Gina will be the chief of the Rom2 branch in RuralTown.* [Rom2 member 2]

Thus, the solution proposed was to create a local branch of Rom2 in RuralTown to which the licence will be transferred and include the volunteers already involved in the station. This option would give Rom2 the possibility to continue its intermediation activity, allowing the community more time to collect the skills to become completely independent in the station's management.

Intermediation as institutioning and commoning

4 *BeefLegends*

This section is narrated from the perspective of the designer as a practising intermediary who specialises in brokering across the commercial and social spheres. Here the project lead (one of the co-authors) was both the intermediary and design researcher: it is a first-person account written in the third person. A key consideration in this discussion is that an intermediary working as a *professional business consultant* whose livelihood is dependent on delivering to a commercial brief has a differently nuanced set of determinants to those of a researcher whose primary output is *research*. For example, the expectation of delivering upon a given brief as determined by the client usually does not prioritise theorising or reflection but rather commercial outcomes. This project sought to demonstrate that within those constraints, community outcomes can be designed-in, and social licence augmented. The project is an exploration of how intermediation in design can produce mutual benefit in terms of both the commercial expectation of the client and a more empowered role for the project's community participants in their region's economy. It sought to offer an alternative to the conventions of corporate social investment, that is, to demonstrate new modes of social engagement that go beyond the orthodoxies of sponsorship and philanthropy.

BeefLegends was a design-led community engagement component of a larger business/research partnership (2018–2020) with Beefledger Ltd, whose overarching challenge was to combat the negative effects of food fraud on the Australian beef industry after the product had arrived in the Chinese market. A major problem for Australian beef producers is that of fake steak, fraudulent provenance, substitute beef, and so on being sold in China as "Australian" when they are not. Using distributed ledger technology and blockchain (Foth, 2017, pp. 513–517), Beefledger collects and analyses data for tracking and tracing the genuine product from feedlot to plate (Cao et al., 2021). BeefLegends became the community engagement component of Beefledger.

The process of engagement enacted through BeefLegends enhanced the data narratives with human-centred digital stories. These were generated in the local communities of production in an educational context and delivered via the barcoded packaging that forms part of the food product credentialing process. The formal intermediary function of the BeefLegends model in this context was to demonstrate how two apparently dichotomous communication challenges—one of commercial value, one of social value—could be reimagined and redesigned for mutual benefit. At their respective ends of the supply chain the commercial project's challenges could be expressed as follows: (i) inward—the promotion of the Beefledger data credentialing model to beef producing communities within Australia, and; (ii) outward—to enhance the data credentials of Australian beef with human-centred, community-driven content in order to contribute to consumer trust. However, at an informal level, in

designing these functions, the intermediary was able to reconcile and imbue the institutional (corporate) agenda with a commoning one related to the value of creative community engagement.

BeefLegends consciously implicated discourses within the arts and cultural sector, namely the activity of storytelling, where and how it occurs, and the ethics and duties of care (to and by *all* parties) in such engagements. It did this from within the more prosaic operational task of subjecting to scrutiny the Australian beef industry's conversation with Chinese consumers. Through a design lens, it enabled the intermediary to observe shortcomings in both the forms deployed by the industry (videos in supermarket displays) and their content (middle aged men talking about cattle). It brought into focus the potential of vernacular cultural forms of digital storytelling, such as TikTok (Douyin). Viewed as a *cultural* issue, we decided to propose a cultural solution.

BeefLegends mediated a nexus between the rural Australian community of production and the accelerating complexity of Chinese consumer culture (Sigley, Powell, & Cao, 2020, pp. 50–51). It addressed the risk that as consumer-driven content becomes more disintermediated (Jallat & Capek, 2001), hyper-subjective, instant, and ubiquitous in the social media age, the conventions of the visual language with which the Australian industry communicates its messages to Chinese markets (documentary videos, promotional clips, branded content) is becoming less fit for purpose, and therefore less effective, in promoting Australian products. Approaching this as a design problem, Beeflegends both mediated communication and disintermediated the conventions of export marketing (cf. Negus, 2002). BeefLegends applied design thinking and co-design methods to the complex relationship between commerce and community (Figure 4). It explicitly sought to break new ground in linking producers to consumers by means of community participation, and to enable new forms of mutually beneficial partnerships within regional Australia between the agricultural sector and the creative industries.

However, infiltrating this commercial and technological context we introduced more probing questions related explicitly, and self referentially, to interrogating the role of the designer intermediary itself. More implicitly still, we insinuated an agenda intended to (a) disrupt the orthodoxies of corporate patronage and philanthropy, and; (b) develop new ways of embedding legitimate social licence in the company's core business. We argue that by taking up position between producers and consumers, both complicitly in the Bourdieusian sense, and as "commoners" in a designerly sense, the intermediary can craft innovations between the two predominant discourses of intermediation, that is, those of the economic broker and those of the social activist.

Intermediation as institutioning and commoning

Figure 4 The BeefLegends intermediary brought together unusual allies: Commercial stakeholders, a delegation of chefs from China, local high school students from rural Australia working across the physicality of food preparation and the digital realm of food provenance data and blockchain. Source*: authors*

4.1 Mediating the fit

The intermediary's first exposure to BeefLedger was as an invited participant in the project's set-up workshop on 29 June 2018 whose aim was to define the specific project details around blockchain and smart contracts and to form the project team—industry participants, researchers, supply chain stakeholders, regulators, end-users—and formalise their contributions. The workshop was attended by technology specialists, regulatory bodies, government, agriculture and industry. Despite the diversity of professional fields in attendance, only one agenda was under discussion at that point: commerce; the project at that stage had no regard to commoning aspirations. The session was dedicated to technology, transaction requirements, economics, and materials. The pivotal, or "light bulb" intermediary moment came late in the day when a farmer from a remote cattle property addressed the group to express his great enthusiasm for the idea of combating food fraud and innovative data credentialing but bemoaned that this topic was too complex for him to convey to his local council because, "we [farmers] are crap at communicating this stuff." The instinct of the intermediary was to reply that he was a professional farmer, not a professional communicator and that this was an area to which a community engagement specialist could perhaps contribute.

Having brokered the notion of community engagement, there ensued a group discussion around the general principles of a methodology. How could such an intervention add value to BeefLedger's aims as well as the local community for mutual benefit? Could we engage with the social or education sectors in beef producing communities to communicate BeefLedger. In doing so could we contribute to those sectors' work in, for example, community capacity building or youth development? In short, by means of creative community engagement, BeefLedger might benefit from and contribute to regional development at the Australian end of the supply chain. Further, we could also explore how such a process might also add value to the product in its retail context. Could locally generated digital stories be woven into a Blockchain system? And if so, what might be the implications for mediating a direct producer/consumer interface and thereby disintermediating conventional marketing? Implicit in that question, but tactically withheld by the intermediary in that purely commercial workshop context, was the question of what would be the implications of such an integration for the field of digital storytelling itself. Initiating and facilitating this kind of discussion in situations where such possibilities have not previously been articulated, is a key component of proactive intermediation.

This key intermediary moment can be discussed on two levels. First, it was the initial identification of an area of possibility in terms of how designing-in a community benefit might be of value to this commercial initiative's stakeholders in their own terms. It identified and gave expression to a hitherto inarticulate but real need, that of better community engagement. The intermediary skills at play in response to the farmer's interjection were: effective listening, empathy, interpersonal skills: "a varied and unique skill set that enables (the intermediary) to quickly balance, make sense of and jump through multiple sectors and scales while at the same time being able to speak to policymakers and local government" (Virani, 2019, p. 7). Towards the end of a long day of strategy and concepts, the farmer did not need more theory. The intermediary drew on a learned alertness to possible gaps, experience in spotting what is missing or not being seen. A designer might express this skill as seeing the "negative space" between forms or entities or actors. In this instance the negative space was a gap within that specific field; between the commercial project's potential as understood by the experts and the farmer's lived reality.

The second level at which the intervention in the workshop can be discussed extends the metaphor of *negative space*. Part of the intermediary's role is to crystallise how issues within particular fields of specialisation can be translated and reflected back within that field and to those adjacent to it. The intermediary needs the capacity for abstraction, or "considering something independently of its associations or attributes" (Lexico, 2021). Mindful improvisation and reflective practice (Schön, 1991) are as important in the brokerage of commercially driven projects such as Beefledger as they are in

any other field of design. The possibility for the subtle introduction of a social agenda into Beefledger's complex commercial and technological innovations, provided the opportunity to infuse that project with human-centred narratives. In this instance, abstraction and improvisation afforded a way of thinking about BeefLedger's intricate weave of diverse technologies, legal and commercial imperatives, supply chain, and target markets.

Being "other" to the commercial and technology fields, the design intermediary conceptualised them as being, in effect, a *narrative*: the digitally verified "true story" of the beef's provenance (Choi, Foth, & Hearn, 2014). Critically, up to that point, none of the participants in the forum had expressed the project in those terms. In doing so, the intermediary drew upon experience in conceptualising projects in which narrative forms are a recognised means by which communities can express themselves (Lambert & Hessler, 2018). Thus, the workshop affords an example of the value of design training to effective intermediation. In this case it was not between two disparate entities in unconnected sectors, but *within* a specific field (i.e., a high-tech agricultural export initiative). It was a means of enabling self-reflection *within* that field before proceeding to fields beyond and the potential social value that might be gained from engaging with them. The negative space had first to be identified, acknowledged, and owned within that field before a solution could be ideated and brokered with the other fields and participants. It might be argued that such proactive reconceptualisation and integration of a social aspect to a commercial supply chain is not of itself "co-design" but a precursor to it. That is, first the intermediary identifies erstwhile unseen possibilities, then we work with clients and stakeholders to co-design the means of exploring and leveraging them.

Thus, moving towards co-design, it is also important for the intermediary to understand the practical, strategic, and discursive issues at play in those other *erstwhile unconnected* sectors. We need a working knowledge of their policy contexts, aims and objectives, and challenges, the general state of play. Only with a reasonable sense of this can the intermediary then design the means of adding value at the intersections and the mutual benefit that can accrue from collaboration. Being in a state of "otherhood," not being "of" any one of those sectors, enables a perspective, an overview from which co-design can proceed. While a holistic view is key to designing for mutual benefit, its expression *at that stage* needs to stop short of detailed prescription, as the specifics should be articulated and owned by each partner in their own terms as part of the process yet to come. Moreover, having described to a group such as the BeefLedger cohort where benefit might lie in collaboration, the intermediary needs to be able to do the same thing in reverse at a later stage with the prospective community partners, from their own perspectives.

Furthermore, in proposing an intervention by creative industries professionals (designers, writers, filmmakers, storytellers), the intermediary needs a thorough knowledge of the creative industries and how to curate and orchestrate them. Thus, the concept that emerged from the workshop addressed the *practical* problems around communicating Beefledger in regional Australia. It was then discussed in the context of providing the workshop participants with a better understanding of the potential *strategic* benefits of engaging with other sectors (community and cultural). It also introduced them to the *discursive* interplay between the project, the sectors, and the research and how the issues at play in those fields intersected with their own core agenda.

4.2 The business proposition of commoning

The integration of community benefit into BeefLedger's core business as an ingredient rather than as a garnish also enabled the interrogation of the practice of intermediation itself. Could we subvert the prevailing models of social investment, the myths of corporate social "partnership," and the orthodoxies of patronage and philanthropy in the cultural sector. This was expressed to BeefLedger as delivering an additional, albeit originally unsought, contribution to their innovative model in terms of new modes of corporate social investment (CSI). BeefLegends afforded the opportunity to demonstrate that there are more creative, cost efficient, and mutually beneficial models of CSI than the rehashed modernist constructs of benefaction promoted by the cultural sector and its apologists. On the corporate side, we sought to offer a better mode of CSI than simply social licence as pre-emptive risk management. Community benefit, professional development of creative workers, and business or economic outcomes need not be mutually exclusive.

However, while this transgressive intent was running in the background as early as the aforementioned workshop, its integration into the project required a degree of circumspection in relation to introducing it too explicitly too soon. Thus, it was quietly inserted in the final paragraph of the project's guiding document with the appearance of an afterthought: *"BeefLegends seeks to go beyond conventional models of sponsorship and corporate social investment and explore more empowered relations between communities, creative professionals and their corporate citizens."* It was deliberately de-emphasised on the grounds that neither BeefLedger nor other stakeholders had cited leadership in social investment as one of their objectives. Nor was there yet sufficient familiarity with the project leadership team to suggest such agendas that early in the relationship. To do so would have risked that topic being seen as impertinent, a hubristic imposition of an external agenda (at worst), or simply not appropriate to the project at hand (at best).

The imposition of an intermediary's agendas to corporate clients such as BeefLedger runs the risk of implying a sense of entitlement, or being interpreted as

didacticism, and does little to foster confidence in the notion of objective or client-focused intermediation. If such a perception generated resentment, it could compromise the financial and other determinants that prevail upon a consultant intermediary, such as the need for pragmatism in getting and keeping the gig. While perhaps sharing social(ist) values and conducting a reflective, ethical practice, the design intermediary needs to be mindful of the risk that their values might not be shared by, or relevant either to those who commission the work or with whom they need to engage in its execution. If the emancipatory agenda runs up against such an individual, their differing value set can manifest as resistance, territorialism, or gatekeeping. Thus, as a professional designer, the intermediary has quite a different set of determinants to those of a funded researcher engaged in explicit institutioning. Nonetheless, researchers in universities have been recognised as having the potential for becoming great intermediaries (Harte, Long, & Naudin, 2019). Furthermore, a key article of faith within the intermediary ethos is that, if it is carried out according to the intermediary's ontological principles, those values will imbue the projects. Tactical caution does not necessarily render the intermediary amoral or apolitical or complicit in the Bourdieusian sense, but simply alert to the risk that in overstating their values or seeking to impose them they can make the brokerage process more difficult than it already is. Thus, the intermediary needs to maintain self-awareness in moderating a degree of subtlety in assembling the project's deliverables.

5 *Intermediaries across institutioning and commoning practices*

In this section we reflect on the two cases presented as examples that afford an opportunity to discuss the role of intermediaries in the design process and explore the merits of intermediation practice for institutioning and commoning efforts in design. We begin this synthesis of the two cases and the lessons learnt by reverting to Section 1, and to some of the main points that originally gave rise to institutioning and commoning in design research. We then turn our attention to the contributions that intermediation practice can make in support of institutioning and commoning ambitions and objectives. Figure 5 illustrates some of our arguments in this section, and we will explain each axis of this graph below—the Y axis in Section 5.1 and the X axis in Section 5.2.

5.1 *Intermediaries and institutioning*

Huybrechts et al. (2017, p. 149) argue that, "instead of ignoring and downplaying institutional frameworks, a re-engagement with institutions is necessary if we are to repoliticise PD [participatory design] and Co-Design." Public institutions (government entities, statutory bodies, regulatory authorities, ministerial departments, etc.) and private institutions (commercial companies, non-government and not-for-profit organisations, etc.) often play a significant role in design research as funding bodies, participants, benefactors, sponsors,

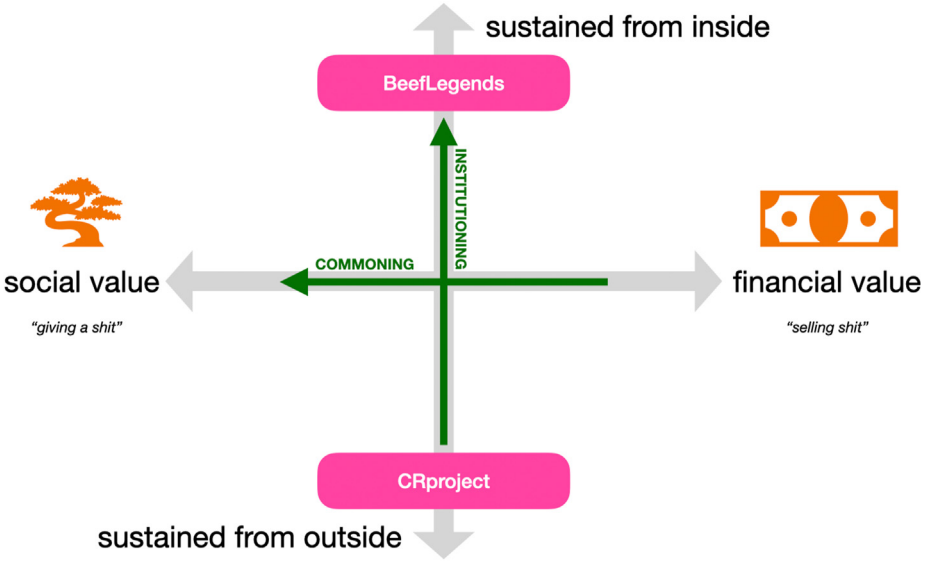

Figure 5 Positioning the two cases in a schematic illustration of the interrelationship between institutioning (Y axis) and commoning (X axis). The axes are orthogonal for convenience in the representation. The colloquial terms "giving a shit" and "selling shit" refer to an attitude of care for social/collective dimensions and to privileging commercial/financial gains respectively.

and end-users. However, part of the call for institutioning efforts to be ramped up is a recognition that design tends to create and carve out its own 'designerly spaces' often in the form of workshops and other participatory design activities. The rules, norms, and strategies embedded in the institutional culture of any participating project partner organisations are (temporarily) paused and replaced with the rules, norms, and strategies that are set by the designers leading such activities (Cairney, 2019; Foth & Turner, 2019). This can lead to challenges, obstacles, noise, and constraints (Kamols, Foth, & Guaralda, 2021; Lodato & DiSalvo, 2018) when it comes to translating the outputs of the design process back into the larger institutional frames we outlined earlier. Additionally, there are other risks and vulnerabilities that can hamper the collective attempts to produce beneficial outcomes for communities. For example, institutional partners can be merely co-opting design practice in a tokenistic manner in an attempt to 'appear participatory' without a genuine commitment for change (Kamols et al., 2021; Monno & Khakee, 2012)—termed 'engagement theatre.'

The intermediaries in our two project examples played a crucial role in both mitigating some of these risks and fostering institutioning efforts. In the case of CRproject, the intermediary role was positioned in the NGOs as allies and thus alongside the role of the design researchers as project leaders and facilitators. In Figure 5, this is depicted as a "sustained from the outside" pathway on the Y-axis of institutioning. That is due to the objective to support

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and sustain the efforts of the CRproject by exercising influence on institutional actors (e.g., government entities and regulatory authorities whose permits and licences are required to enable the community radio). In the case of BeefLegends, the role of the intermediary was as part of the industry/research team and closely embedded and working with the commercial partner. So it is shown in Figure 5 as a more "sustained from the inside" approach to institutioning. While coming with key differences, both approaches are legitimate and also show that there are options for designers to be working *with* intermediaries as well as working *as* intermediaries.

What both experiences suggest is the useful contribution of intermediation practice in assisting design efforts by helping to negotiate access and entry into institutional cultures, providing the diplomacy skills to navigate different agency and power relationships, and reconceptualising institutions from the stereotype of a Kafkaesque bureaucracy to one that can open doors for scaling up the impact of design research (Foth & Turner, 2019; Frauenberger, Foth, & Fitzpatrick, 2018). While many designers possess an immense level of tacit knowledge of what here we call intermediation practice, which is largely the result of 'learning on the job,' we argue that there are key advantages of a more explicit engagement with intermediation practice by design practitioners. Such benefits and advantages are not limited to institutioning but also stretch to commoning efforts.

5.2 *Intermediaries and commoning*

The significant role that intermediaries can play in supporting, amplifying, accelerating, and expediting commoning projects and approaches in design is corroborated by the immense complexity and dynamism of what designers and their allies face up to on a regular basis. Designers are usually trained in agile and lateral thinking skills (Cross, 2006; Kurlansky, 1998) combined with an interdisciplinary polymath foundation to at least feel comfortable if not even thrive on uncertainty and social, cultural, commercial and environmental entanglements. However, for whatever reasons this skill set that is often primarily applied to the actual design process at hand, does not always translate and apply to a broader helicopter view that encompasses societal and planetary scales. The conundrum of designers producing arguably excellent outcomes when assessed on their (or their clients') own terms of reference, which nonetheless do not resolve—or even worsen—the wicked problems we face on a global scale, has been the focus of debate and contention in design scholarship for quite some time (Dourish, 2010; Foth, Tomitsch, et al., 2015; Light, Powell, & Shklovski, 2017; Monteiro, 2019). Various constructive approaches have been proposed in response, e.g. more-than-human and post-anthropocentric design (Clarke et al., 2019; Luusua, Ylipulli, & Rönkkö, 2017; Yigitcanlar et al., 2019); protest, community activism and antagonism (Foth,

Brynskov, & Ojala, 2015; Kuznetsov et al., 2011); adversarial design (DiSalvo, 2015), and; commoning, amongst others.

Opposing and protesting against the hegemony of the dominant political framework—e.g., neoliberalism (Knafo, 2020)—and the dominant economic framework—e.g., capitalism (Hakken, Teli, & Andrews, 2015)—with an approach characterised by a combination of adversarialism, antagonism and activism is a valid tactical choice for commoning approaches. Having said that, even the (temporary) strategic 'essentialization' (Dourish, 2010) that usually has to occur to bring the diversity of protest voices together and to agree on a strategy requires advanced intermediation skills. However, here, in the context of the two examples we analysed, the commoning strategies devised are not characterised by antagonism, but by the tactic of working *with* (CRproject) or entering and being embedded *in* (BeefLegends) the institutional entities and their culture. This enables the project to tap into the power and authority, which the institutions derive from their position within the established social structure—yet for the benefit of the project's commoning objectives. The intermediary's role offers the project an opportunity to wield influence and efficacy of a calibre usually unlikely to be seen and achieved easily if intermediaries were absent from the project and design activities occurred just on their own terms. The capacity of intermediaries to aid in institutioning efforts has thus a direct impact on the ability to produce commoning outcomes, in particular when it is evident that the interests of the actors involved and the definition of commoning practices differ among participants. For example, in CRproject, the NGOs, the designers, and community members had explicitly different interests and views relating to the establishment of a community radio. Rom1 and Rom2 intermediation, investigating and advancing the interest of the community in the face of the institutional setting of a research project, proved vital for the radio's success.

The commoning efforts in both cases here are greatly assisted by the intermediaries who are more leaning towards consensual or even dialectic pathways (Dick, 2002; Frauenberger et al., 2018; Fry, 2003; Ollman, 2003). If the intermediary recognises that commoning outcomes may not be palatable to the institutional stakeholders from the outset, strategies and tactics are devised to either engage in an explicit dialectic dialogue that aims to build agreement from disagreement (Dick, 2002), or identify new ways to reconcile commercial values and outcomes with social (and/or environmental) values and outcomes (Figure 5). The application of intermediation practice in the BeefLegends case demonstrates the utility of a subtle integration of an emancipatory, or social agenda that may not have been sought in the beginning, and which might have compromised the project's full potential for achieving commoning outcomes if it had been explicitly stated from the outset or introduced too early. By working with institutional partners, and using intermediation practice to identify and produce positive outcomes for the communities involved, the

cases we presented negotiated tailored project delivery pathways that produced commoning outcomes and impact not despite partnering with (commercial/political) institutions but in fact using their power, agency and scale making capacities.

6 Conclusions

In this paper, we contributed to define and discuss how intermediation practices can help designers working in-between grassroots communities and existing institutions with the goal of favouring commoning practices while leading institutioning efforts. Drawing upon the analysis of the two case studies—CR-project and BeefLegends—we recommend that design researchers: (i) explicitly articulate the role of intermediaries in their project; (ii) foresee and reflect on the required competencies and skills—in order to; (iii), refine their sensitivity to institutional power dynamics at play. We believe these tactics can support design researchers in improving their practice and thus outcomes and impact.

We are aware of the limitations of our work, with two case studies compared through the lessons learnt and not through a full-scale comparative research design. As well, our exploration of the concept is just an initial assessment. We are looking forward to exploring these issues further, as well as to see other contributions based on case studies that span beyond the culturally Western perspectives in which we have worked. Moreover, the discussion on the relation between subversive, agonistic, and antagonistic practices would deserve a space that exceeds what is available for this paper.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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