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Abstract

The governance of shared resources through collective actions to prevent 'the tragedy of the commons' has long been a controversial topic in management studies. Hampered by a lack of formal organisational structures, small locally-governed commons are usually managed through informal networks and, hence, largely studied in this context. However, Italy's formalised network contracts initiative provides a unique and relatively rare opportunity to study how the business-led collective action of a formal meta-organisation influences the use of commons. Using a mixed-methods qualitative approach, this paper reveals how particular organisational features, especially collaborative and social learning, can play a critical role in driving formal meta-organisations toward positive outcomes in three progressive stages: commons protection, commons stewardship, and commons governance. The analysis is framed by two different streams of literature – meta-organisation theory and sustainability science – with implications for the theory and praxis of both.

Introduction

If one were to paint a picture of history's entire discourse on the tragedy of the commons, nothing would be more evocative than a watercolour of the arid Aral Sea or the fishermen of Kerala in India with boats full of plastic residue instead of fish (Glantz et al. 1993; Hardin 1968; Jentoft et al. 2009). In sustainability science, the tragedy of the commons refers to the threats wrought over common pools of resources through over-exploitation or destruction by human hands (Hardin 1968; Tosun et al. 2016; Vollan and Ostrom 2010; Ostrom 2008a). The term *common goods* (commons) in its Aristotelian sense means overall well-being for everyone (Garriga and Melé 2004; Hoipkemier 2016; Perkiss and Moerman 2017). In its application to economic goods, commons means natural resources, grasslands, forests, fisheries, and even intangible assets like knowledge and culture (Gibson-Graham et al. 2013; Paudyal et al. 2016; Setti and Garuti 2018). Commons are endemic to any socio-ecological system where biomes and wildlife co-exist with humans. As such, destroying these resources is a process with no return (Hardin 1968; Ostrom 1990, 2008a; Virapongse et al. 2016).

Three strategies can prevent a tragic end for commons: privatisation, public governance, and Ostrom's legacy of the general theory of collective actions (Ostrom 1998; Ostrom and Ahn 2003). Ostrom's theory states that through collective actions, individuals place collective well-being before economic rationality, which, in theory, should push them toward preserving their self-interest (Ostrom 2008b; Vollan and Ostrom 2010). In terms of preserving commons, the current forces marshalling collective action are networks of organisations (Elsen 2018). Hence, in this context, meta-organisations are emerging as a relevant research niche.

Meta-organisations are collections of organisations linked through membership (Ahrne and Brunsson 2005, 2008) and shared attributes, such as belonging to the same business sector or supply chain (Ahrne et al. 2017). Although they appear with a different degree of formalisation, one can ideally think of meta-organizations as associations, federations or simply networks, not based on individual membership, but on an organisational adhesion. Well-known examples of meta-organization in the sustainability area include the Global Reporting Initiatives, the Global Compact, the CSR Europe, the World Business Council For Sustainable Development, as well as others that are perhaps less well-known, such as sector-based multi-stakeholder platforms like the Extractive Industries Transparency Initiative, or the Marine Stewardship Council. The types of meta-organisations of most relevance to this study share a similar system-level ideology of stewardship (Berkowitz and Dumez 2016; Gulati et al. 2012; Martí 2018) – for example, 'individual sustainability coincides with eco-system

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sustainability' (Vifell and Thedvall 2012) – and their goals relate to the conservation of small-scale ecosystems.

Further, meta-organisations can be distinguished into formal meta-organisations, where a decided social order is present, or informal networks, where the boundaries have a higher degree of permeability and the internal structure is extremely fluid. Since the structure and rationale of meta-organisations support collectivism, not individualism, their study can be important in the field of ecosystem sustainability, particularly since the sharing of duties and responsibilities are common traits (Berkowitz and Dumez 2016).

Italy's "formalised network contracts" system is a good example of a formal network structure. A formalised network contract (FNC, in Italian "*Contratto di rete*") is an Italian legal instrument that pertains to formal multi-organisational arrangements and its associated statutes. An FNC establishes the composition of a meta-organisation's member network, its aims and duration, the protocols for entry and exit by members, sanctions in the event of non-compliance, and the procedures through which members achieve a shared consensus (Cantele et al. 2016; Cisi et al. 2018).

Scholars commonly recognise all these features as core to every meta-organisation (Ahrne and Brunsson 2008; Berkowitz and Bor 2018) and, equally, scholars of collective action recognise these same features as common problems with collective actions (Dietz et al. 2008). This overlapping contrast makes FNCs an appropriate context for studying the connections between meta-organisations and commons.

There is general support in the sustainability science literature over the suitability of meta-organisations to foster sustainable development. Informal networks of micro-companies have already been confirmed as a robust context for analysing the business to nature relationship. However, formal meta-organisations and the role they play in small locally-governed commons is under-researched (Araral 2014; Weitz et al. 2017). Studying whether and how these formal meta-organisations can also contribute to commons governance is entirely new.

Several questions are unanswered. What is the capability of formal meta-organisations to protect or govern common resources? Which factors overlap in the conservation and protection of common resources? Which organisational features – either present or absent – foster commons protection? What role does organisational learning and social learning play in supporting the move from simply protecting commons to commons governance? The aim of this research is to prepare a model that can explain the conditions under which formal meta-organisations might become effective in governing small-scale commons.

We drew on two theoretical frameworks as background for this research – meta-organisational theory and the theory of the commons – and applied them in an analysis of eight Italian FNCs with particular relevance to small local commons. Some FNCs represent collective governance networks; some do not. The nature of the study is exploratory, qualitative, and relies on a mixed-methods approach. Content analysis triangulated with direct interviews combines to reveal a set of organisational features that can drive success in achieving meta-organisational goals.

Therefore, the paper illustrates two main findings. First, the study demonstrates linearity between meta-organization theory core features and the structure of the legal network contracts highlighting such a wide range of commonalities. Second, three developmental stages of formal meta-organizations operating in association with the commons emerge. These three stages correspond to meta-organizations for protecting, for the stewardship, and, finally, for governing the commons.

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Consequently, among their organisational characteristics, the paper explores the mediating role of social learning in determining the effectiveness of the meta-organisations for governing the commons.

1 Literature review

This review spans the literature on both meta-organisations and the management of common goods through collective actions. These two streams belong to different fields of knowledge, the former being organisational science and the latter sustainability science. The links between these two streams are the key to framing the FNCs investigated in this study.

1.1 Meta-organisations and sustainability research

Meta-organisations are formal organisations whose members are themselves organisations (Ahrne and Brunsson 2005). Meta-organisations are characterised by the similarities between its members, such as a shared purpose, common activities, or the results achieved through coordinated actions. Gulati et al. (2012) outline that meta-organisations have two essential features: managerial autonomy between members, and external boundaries that delineate one meta-organisation from another. Each meta-organisation is a managed democratic eco-system where no central actor exercises formal authority. Consequently, competition and collaboration co-exist, giving rise to one of the most prominent research fields in organisational behaviour (König et al. 2012).

Management scholars who have investigated meta-organisations typically separate informal networks from "pure" ones, i.e., formal meta-organisations (Berkowitz and Dumez 2016). Formal meta-organisations have: rules governing the entry and exit of members; a clear definition of the meta-organisation's mission (Spillman 2018); a definition of each member's role within the network (Martínez-Costa et al. 2018); equitable collaboration for shared decisions; and operational procedures to achieve their mission (Valente and Oliver 2018).

Since meta-organisations can be formed for very different reasons and objectives, studies and taxonomies on their functions are challenging to find (Brankovic 2018). Even so, a great many studies on the potential of meta-organisations in sustainability have been conducted in recent years (Berkowitz 2018; Berkowitz and Bor 2018). For example, Berkowitz (2018) finds meta-organisations can be a vehicle to boost sustainable innovation or solve grand challenges, while Vifell and Thedvall (2012) explore their potential in the field of Fairtrade, and Chaudhury et al. (2016) see meta-organisations as a tool for collaboration in fighting global climate change. Other contexts of study include regulating sustainability standards in the oil and gas sector (Berkowitz et al. 2017) and the palm oil supply chain (Carmagnac and Carbone 2019) and solving poverty issues in sub-Saharan Africa (Valente and Oliver 2018).

These and other studies have raised calls for more research on meta-organisations to provide deeper insights into their functioning, objectives, and challenges in relation to sustainable development (Silvestre and Ţîrcă 2019). The calls are particularly loud for research that combines qualitative and quantitative methods. Among them, Laurent et al. (2019) assert the need for further research to demonstrate the ability of private organisations, such as meta-organisations, to work for the public interest as an opportunity to renew action in addressing global societal challenges.

1.2 Protecting commons through meta-organisations

The seminal paper, "The Tragedy of the Commons", by Hardin (1968) highlights the competing logic in managing common pools of resources, such as fisheries, land, and irrigation systems. In this work,

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Hardin outlines a tragic scenario where the individual interests win out over the importance of preserving exhaustible resources in unregulated economic systems. However, Ostrom (1990, 2008a; 1999) and Agrawal (2001) demonstrate just the opposite. Their research shows how individuals prefer to safeguard against over-exploiting common goods. As a result, they suggest collective action and self-governance may be a more viable solution to problems with commons (Araral 2014). Time appears to have claimed more victory for Ostrom and Agrawal's side of the debate as socio-ecological systems have become more protected, more robust, and more resilient than Hardin's tragic prophecy foresaw (Anderies et al. 2004; Folke 2006; Virapongse et al. 2016).

The unique attributes of commons have stirred great interest in the economics and management disciplines. Their openness and accessibility, the intense competition between concerned agents that surround them, and their fragility (Falk et al. 2002; Setti and Garuti 2018) raise many issues worth exploring, especially stewardship (Ostrom 2009; Schweitzer et al. 2009). The literature affirms that the tragedy Hardin speaks of can only be avoided by adopting social norms that promote aggregate solutions. Different individuals and stakeholders must co-decide and regulate themselves on strategies to exploit, protect, and promote the commons (Kahn 2014).

The reciprocal normative activity can solve issues arising from collective actions (Vollan and Ostrom 2010), such as access to information, inter-organisational conflicts, sharing infrastructure, and adapting to change (Dietz et al. 2003). Similarly, by adopting shared norms, a meta-organisation roots its unique worth, rather than aligning itself with the values of others in an isomorphic manner (Li et al. 2017; Raum 2018; Soma and Vatn 2014). Businesses inside a meta-organisation must obey common rules, learn principles of solidarity, and respect the nexus between the commons and their eco-system (Muneepeerakul and Anderies 2017; Tosun et al. 2016). Consequently, the behaviours of the members impact the effectiveness of collective efforts (Shearing and Wood 2003).

1.3 Exploring Italian formalised network contracts as potential formal meta-organisations

Previous studies have shown that the process of identifying an informal meta-organisation can last years. Informal meta-organisations often involve hundreds of stakeholders and are intrinsically fluid (Héloïse Berkowitz and Bor 2018; Chaudhury et al. 2016; Valente and Oliver 2018). Therefore, we have decided to focus on formal meta-organisations operating with a business model that bridges a small local commons. As mentioned, FNCs were established under the Italian law in 2009 to provide structure to business-oriented organisational networks. The number of FNCs has since grown by an average of 20% each year, where, as of December 2018, more than 31,283 companies, mostly small and medium-sized businesses, are networked within 5084 FNCs (Unioncamere website, accessed in December 2018). An FNC includes all the data related to: its members; its mission, vision, and strategic plan; the network's values; its operational structures; and the controls over its outputs and outcomes (Cisi et al. 2018). Thus, we argue that FNCs are formal meta-organisations.

Each FNC results from a multi-phase process – negotiation, compromise, resolution – to form a balance of authority between its members. These formal meta-organisations collectively assemble the actions of individual entrepreneurs, small companies, and micro-companies (Cisi et al. 2018). FNCs explicitly outline the willingness of the member parties to cooperate to achieve common business objectives, like investing in shared projects for innovation, marketing, or internationalisation (Lombardi 2015; Ricciardi et al. 2014). The novelty of this study lies in exploring the formalisation of commons protection with sustainability as a binding rule (Corazza et al. 2018). With this in mind, this study contributes to the debate on the governance of common goods through a self-normative

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approach that requires networked organisations to adapt their business models toward coopetition, i.e., cooperation between competitors (Azzam and Berkowitz 2018).

1.4 How formal meta-organisations relate with commons: the role of social learning

The natural and physical features of the commons influence the organisational identity of small businesses as single entities and, by consequence, as a network (Chaudhury et al. 2016). For example, Cantino et al. (2017) demonstrate that the organisational identity of enterprises based in a particular place is directly influenced by the knowledge dynamics of the informal context and by the social network of the actors operating with small-local commons. The propensity for mutual exchanges can be helped or hampered by externals pressure from organisations outside the network who are still bonded by the commons. Mission drift, freeriding, and extortion consequently occurs (Berkowitz 2018). Long-termism, for instance, is based on complementarity and is characteristic in situations where members must develop flexible technologies, processes, personnel, and knowledge to suit the salient features of the commons (E. P. Weber and Khademian 2008).

In organisational learning literature, Smith et al. (1996) clarify that the continuous development of new knowledge, and the nurturing, and enhancement of existing knowledge, happens through continuous interactions among individuals and organisations over a long time period. Unfortunately, as the knowledge creation and transfer among members take place over time (Crossan et al. 2011; Moustaghfir 2009), we expect that, in our study, the most successful cases will be the ones with a longer duration compared to the others. Conversely, organisational learning inside the network can be influenced by the long-term fragility and accessibility of the commons (Araral 2014; Berkowitz and Bor 2018).

Organisational learning theory can provide a fruitful contribution to the theory of the commons with its notion of a social learning approach. Social learning is the approach used by Coudel et al. (2011) to explain and define learning dynamics in non-stable organisations with heterogeneous actors where a change is desired. For instance, Coudel et al. (2011) explored this change in the affirmation of a societal model linked to sustainability in rural contexts. This is a similar context of study to our sample of formal meta-organisations operating in small and local commons.

The work of Coudel et al. (2011) is of paramount importance in bridging social learning and commons. Their research demonstrates that the purpose of social learning is one of learning to cooperate in the presence of different actors. They directly associate this concept with the notion of governance that involves different stakeholders, and in political decisions when the interactions between local actors, public actors, and private ones, may have an interest in environing societies. For environing, we mean the crasis between two terms: governing and the environment. That is the development of activities for governing the natural environment that come from citizens, organisations and public actors, who share environmentally-focussed goals and processes. In the case of meta-organisations in the context of commons protection, members must demonstrate they have the proper level of the so-called “green organisational capital” in the way they effectively develop proper organisational capabilities, commitments, and culture aimed at protecting the commons (Delgado-Verde et al. 2014). Indeed, it is reasonable to expect that social learning will play a relevant role in pushing meta-organisation from commons protection to commons governance because social learning enables collective decisions and participation as there is an action orientation (Baskerville and Dulipovici 2006).

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2 Methodology

2.1 Step 1: Access to the documents and sampling procedure

A three-step mixed-methods approach was used to conduct this qualitative research to explore the capability of meta-organisations to work for the protection of small-scale commons (Creswell and Clark 2011). In Step 1, we selected the FNCs to be analysed. The website of the Italian Association of Chambers of Commerce, Unioncamere was our starting point. Public access to the FNC agreements is not free but a database of the titles and abstracts of all FNCs is available, and full access to the content is available by paying a license fee for each document.

Consequently, we randomly selected 350 FNCs from the overall list. We began by manually coding the titles and abstracts according to specific criteria, such as:

- the presence of an explicit mention of a verified commons according to Setti and Garruti's definition (2018);
- more than two participants had joined the contract, as according to Berkowitz and Dumez (2016) dyadic relations should not be considered as meta-organisations;
- the identified commons were small and locally-defined, as Araral (2014) asserts this to be a robust way of demonstrating Ostrom's theory of collective actions.

We then manually confirmed that the identified FNC had been conclusively linked to a commons according to the feature definitions given in Setti and Garruti (2018), e.g., mountains, lakes, seas, volcanoes, protected areas, etc. Some less tangible commons, such as traditions, culture and knowledge were treated according to the notion of *ethnos*, which is typical of Italian civil society. Ethnos is a concept proposed by the ethnoanthropologist Tullio-Altan (1995), where ethnonational identity is defined as the union of anthropological, cultural, civil, and social aspects that, when combined with a particular soil, create a civilisation.

The theoretical sampling applied here (Eisenhardt and Graebner 2007) has worth in improving the validity and the benefits of case analysis for grand challenges that are systemic in nature and require transformation to solve major societal issues, such as health and wellbeing, sustainable agriculture, pollution, climate action, marine ecosystem preservation (Eisenhardt et al. 2016). At the end of the process, eight FNCs were selected as our sample (Table 1) representing a wide range of biomes like alpine territories, maritime territories, and hilly territories. Consequently, coding the FNCs into small regions served our purpose of exploring if and why collaborative networks can protect a common (Araral 2014). Overall estimation of the area for each commons was calculated with Geographic Calculator software. The intent was not one of creating categories of size; the real objective was to obtain a term of comparison that could be useful in learning its geographic extent, even to those who do not know the typicality of that particular territory.

[INSERT TABLE 1 HERE]

Table 1 Rationalisation of the FNCs collected and analysed

To preserve the anonymity of respondents, the FNCs were labelled. Only labels were used during coding and to triangulate the content of the interviews with the information contained in the FNC or any other material used to understand the meta-organisation. The use of acronyms is recognised as valid when analysing networks of subjects (Ricart and Gandolfi 2017).

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2.2 Step 2: The research model

Step 2 involved qualitative content analysis (Hsieh and Shannon 2005; R. P. Weber 1990), a method widely used in management sciences and also used to analyse the content of legal documents. The coding of the textual corpus of each FNC was performed using QCAMap software. All sections of each FNC were coded according to key aspects of two theoretical frameworks: the theory of meta-organisations (Ahrne and Brunsson 2005) and the theory of collective action (Dietz et al. 2003). Meta-organisation theory and the collective action theory share some crucial elements that impact over the content of the contract such as: organisational identity, management dynamics, conflict resolution management procedures, changes and adaptations, and the dynamics of organisational learning and information exchange. Key concepts of meta-organisation theory, according to the study of Ahrne and Brunsson (2005) have been used to perform a top-down coding of the content of each FNCs. As FNCs are typically written starting from a conventional structure given by law, the order of appearance of the sections has not been considered as relevant to our research. We explicitly focused our research on the additional paragraphs and sentences added during the negotiation phase of the contract, where members arrive at a shared consensus. The second type of coding, a bottom-up coding, also called grounded open coding, has been used to process the content linked to commons and connected organisational issues (Silver and Lewins 2014). In short, if this first coding helped the researchers in investigating whether FNCs are formal meta-organisations, the second coding was used to investigate how FNC merge the content of the contract with their concrete actions (see Fig. 1).

[INSERT FIGURE 1 HERE]

Figure 1. Research model exploring the link between the literature on meta-organisations (Ahrne and Brunsson, 2005), the structure of a formalised network contract, and the main issues emerging from the theory of collective actions for the commons (according to Dietz et al. 2003)

Whereas most of the existing research on commons relies on field-based methodologies and/or active research techniques, this study demanded a research architecture solid enough to guarantee the reliability of the data and, consequently, the conclusions drawn even without the active intervention of the researchers. The process discussed by Elo et al. (2014) helps researchers to prepare materials, organise the research process, and report trustworthy results. Moreover, Elo et al.'s (2014) methods assist with case selection to ensure a homogeneous sample that is truly representative of the subject under study.

[INSERT TABLE 2 HERE]

Table 2: The phases and procedures of content analysis according to Elo et al. (2014)

2.3 Step 3: Triangulating the data

According to Elo et al. (2014), a study can increase its authenticity and conformability and, thus, enhance the quality of the method applied. An answer to that issue was interviewing the participants in such FNCs. Interviews enrich the content analysis and are fundamental to creating a model that is able to explore, and explain, the conditions under which meta-organisations can be effective in governing the commons. Our interviews were conducted with a probing intent to corroborate the findings that emerged during the content analysis. Confirmations, negations, restatements, clarifications, and ambiguities that neither confirm nor deny a topic were emphasised (Norese and Salassa 2014). An official invitation was sent to the 124 organisations involved in the eight meta-organisations. In most cases, the invitation was redirected to the FNC's coordinator.

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During these semi-structured interviews, we discussed our preliminary findings from the content analysis and attempted to extend the interviewees' thinking beyond what was formalised in the FNC. All interviews were conducted during the period from April 2018 to November 2018 either by phone or Skype, and each was recorded. The duration ranged from 10 to 60 minutes. Interviews were conducted in Italian by the principal researcher, a native Italian speaker, who transcribed and translated the recording into English. If the content of the interview had reported idiomatic or typical expressions of a particular dialect or the Italian language, the meaning of the translation was agreed internally by the authors. Twelve interviews were conducted in total, with at least one interview held for each FNC, which was sufficient to establish theoretical saturation as discussed by Guest et al. (2006). In two cases, additional members of the meta-organisations decided to join the interview, which accounts for the additional four.

3 Findings

3.1 Network size, regions and duration of the FNCs

Table 3 reports salient information about the members of each meta-organisation. The number of member companies in the FNCs in our sample ranged between three in the case of *FRA* and 36 for *LOM*. The two largest FNCs in terms of members include many individual entrepreneurs and SMEs (*ETN* and *LOM)*. The two FNCs covering the smallest regions were *PEN and LEU*. However, the exact area covered by *FRA* is hard to calculate given this FNC concerns a pilgrimage route of 400km in length. The duration of the contracts ranged from two years for *CIM* to 39 years for *PEN*.

[INSERT TABLE 3 HERE]

Table 3 Members, duration, and geographical regions of the FNCs

3.2 Descriptions of the commons associated with each FNC

All the FNCs in the sample can be defined as socio-ecological systems, i.e., a unique complex of bio-geophysical units and its associated social actors and institutions (Anderies et al. 2004; Folke 2006; Virapongse et al. 2016). Socio-ecological systems represent the loci of commons and, sometimes, they are commons themselves. The shared pools of resources were landscapes, a volcano, a natural reserve around a lake, a river and its coastal area, a mountain, rice fields where an endemic variety of rice is cultivated, a pilgrimage route, and a historic industrial site. The commons associated with each FNC is described in more detail in the remainder of this subsection.

ETN is active in the Sicily region with the aim of promoting the social and environmental value for the north face of the Etna volcano. This site is compromised by unregulated flows of tourists that are polluting its slopes and impacting its flora and fauna. Most of the participants in *ETN* are either farmers, apartment tenants, small tour operators, or associations. The FNC's charter is to self-regulate a sustainable flow of tourists to that commons. A tourism entrepreneur within this FNC explains: "As Etna is unique, we cannot run our business without regulations; we should act together to preserve that physical space. In the end, it is about our money." In particular, that FNC reveals how preserving the commons impacts their local economy, which, in turn, is based on custody of the commons itself. ETN's FNC reports:

> *Our first aim is to overcome one of the major problems that historically afflicts the Sicilian tourist offer, the micro-fragmentation that must act to preserve intact its geo-*

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> *morphological, environmental, structural, and cultural prerogatives. This can be guaranteed by rediscovering the sense of belonging to the territory as a mere aggregative moment of the local communities which is entrusted with the care and custody of an asset that, if properly valued, can represent an authentic driving force for the island's economy*.

PEN, CIM, and *DLT* are all linked to water quality and the biodiversity of aquatic environments. *PEN's* purpose is to manage Penna Lake as a common resource for society and its people inside this natural reserve, which includes commercial and tourism interests. The variety of members is large from social cooperatives in sport, tourism, and leisure to agriculture in linen, hempseed, chickpeas, and legumes. Other cooperatives represent the interests of environmental education, nature documentaries, and the production of ceramics. All members are bonded by their location inside the reserve. They are as much a part of the commons as its lakes and mountains, as they play a key role in shaping the landscape and its integrity. *PEN's* agreement states that all actions must be coordinated between all its members to allow the preservation of, and the knowledge about, their territory.

CIM unifies the tourism operators of Alpe Cimbra, from ski rentals to a hotel to an alpine refuge. The members seek to create a common strategy for sustainably exploiting the region, its forests, and its routes, as a tourist destination. In this FNC, Alpe Cimbra and its surrounding areas are recognised as a source of "profit" to be exploited sustainably.

DLT comprises consortia of farmers, fishers, shellfish producers, alongside cooperatives for environmental education and the promotion of fish processing and bathing establishments. Promoting the sustainable use of the coastline and valleys is one of the main aims of the companies operating within the National Park of the Po Delta. For instance, the fragility of the commons is denied in the FNC, but rather explicitly reported to the contrary: "… sales of all-natural products are aimed at generating income for the local population, but always respecting the values of sustainability".

Some of the FNCs represent a specific socio-ecological system that is also linked to an ethnos. These are *GAR, FRA*, and *LEU.* While *GAR* is more focused on promoting Veronese culture and heritage, through wine, art, small villages, and the like, *FRA* and *LEU* are grounded by religious and cultural values.

The members of *FRA* manage a cultural and tourism centre to promote the pilgrimage route Via Francigena, which passes through their region from France and Canterbury to Jerusalem. It was along this route that ancient pilgrims and Crusaders sailed from Puglia to the Holy Land. Their agreement states: "Companies put in place actions aimed at increasing the accessibility and usability of cultural, material and immaterial, archaeological, monumental, landscape, environmental, historical and ecclesiastical heritage." Notably, however, the commons are to be promoted and re-discovered more than protected, and this meta-organisation offers direct support in that endeavour. Access to the commons is a function of how difficult the route is to reach, as most of its length passes through ancient trails in remote areas that are not served by public transportation in our modern day.

LEU boasts the most members of all the FNCs, and all operate in the textiles sector. This meta-organisation has a common interest in promoting silk production and in preserving and promoting knowledge of San Leucio historic industrial sites. Founded in 1776 by the King of the Two Sicilies, Ferdinando IV di Borbone, the Real Colonia di San Leucio wove the silks that still decorate salons around the world – the Vatican, the Quirinale, and the White House, to name a few. Today, an amazing terrace hosts many of the old wooden mills; however, accessing these commons is not easy. Consequently, promoting them is challenging. Their FNC's mission statement is:

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> *To promote and realise silk production at the Belvedere of San Leucio with the operational commissioning of the frames and to involve the City of Caserta and the competent Superintendence, aimed at enhancing the accessibility to Belvedere of San Leucio. (LEU).*

LOM's commons are the most fragile due to their potential for impact on biodiversity. The Lomellina Territory is defined in the agreement as "unique in its kind" (LOM). *LOM* serves to protect and enhance a key part of Italy's rural heritage connected to rice cultivation in Lomellina and to a specific variety of rice called Vialone Nano. Alongside rice producers (most of which are individual entrepreneurs), *LOM* includes an irrigation association, a commodity exchange for rice, and organic farmers. LOM is an example of an atypical commons because the rice producers own their lands, but their production is a common good that needs to be safeguarded. As explained during an interview with one of the rice producers:

> *This variety of rice contains selenium, I have a production discard from 1 to 4%. My field-mate (10 km from here) has a discard of 12% because this rice I cultivate is endemic of this land.*

Additionally, the water used to irrigate the fields has been directly defined by Ostrom et al. (1999) as an example of a common pool of resources.

3.3 Meta-organisational identity, degree of coordination and public actions

FNCs are executed from a point at which all members agree on the contract's stipulations. Our analysis reveals three stages of development for the meta-organisations in our sample. These evolutionary stages are protection, stewardship, and governance. Commons protection was determined by the mention of concepts like safeguarding or using the commons 'in a sustainable way' within the FNC. Stewardship was based on FNC functions like creating external awareness, advocacy, research, and/or knowledge transfer. Beyond their promotional purposes, these actions also create a sense of belonging that may then extend to outreach for external business partners.

Governance is the last stage of development. Only two of the cases in our sample have reached this point, partially because of a void in governance by other authorities. With no support from public policies, *PEN* has assumed the role of self-proclaimed steward for the territory. Their FNC states: "We propose us as a leading subject on the local scene for technical advice in the management and knowledge of the historical and natural resources of the territory". *PEN*'s research centre manager added to this claim during an interview:

> *Operating through a networked approach has an extremely positive impact on our business as we started to be recognised by our business partners as one subject. We focus now even better on our mission; we are scaling up. We started to enrich our infrastructure. For instance, we started a drone school to monitor wild species. We work with WWF to safe wolves and the fauna of Gran Sasso. We have now more than 50 theses made by students. We run up an editorial and video making companies. We are now a real community because we are embedded with our land.*

The second case demonstrating an advanced development stage is *FRA*. As stated in the FNC, *FRA's* mission is:

> *The promotion of the territory, of its cultural assets and activities, of the most original and authentic forms and identities of the tradition, through forms of slow tourism,*

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> *sustainable, accessible, and responsible tourism with the institution of a "Center of Francigena Excellence", to be made available to contractors and partners, with the organisation of technical tables and seminars for in-depth study, training and qualification of personnel, editorial productions, studies and research.*

What emerges transparently from the words of the respondent is the lack, in the past, of public actions for promoting the territory and its intrinsic characteristics. This sort of expectation spurred the companies themselves to replace the public decision-maker in governing the commons. In our interview, the network manager elaborates, stating:

> *We are witnessing a chasm of the public deficit for the protection of some places in the Apulian hinterland. So, we decided to become spokesmen for the need to protect those areas. They are wonderful, both from a historical, cultural and religious point of view. All our members are companies sharing the value of slow handling, that is, the slow fruition of religious places and routes.*

In this case, there is a lack of public management, which has forced the meta-organisation to act on behalf of the commons to some extent. They were the first actor to propose formal recognition of the physical, natural, historical, and architectonic value of the pilgrimage route from Leuca to the Holy Land at the European level. This policy-shaping behaviour has already been evidenced by Spillman (2018) in other operating contexts, but only as consequential to the meta-organisation's establishment.

Further, becoming a leader meant the need to transform the internal organisational structure of the meta-organisation through the development of a business model that is able to address different business need simultaneously. One interviewee, an editor, said:

> *We have a clear advantage of being together and sharing. We are in love with the idea of attracting resources for our land. We organised ourselves with horizontal mechanisms on certain fronts, while for others, as in the case of finding the financial resources to be raised to the protection of the Via Francigena, we move as a network.*

Possible explanations for this ambidextrous perspective may be the need to optimise resources while increasing the number of opportunities to preserve the integrity of the meta-organisation against the risk of disaffection by its members.

3.4 Meta-organisation and collaborative social learning

The features associated with stability and instability highlight the barriers and limitations of these meta-organisations to protect and sustainably use their commons. Except for *FRA* and *PEN*, we found contradictions in all other cases, many of which the literature on meta-organisations already recognises. Freeriding (Berkowitz and Dumez 2016), a lack of organisational learning or the propensity for social learning (Ahrne and Brunsson 2008), and inertia (König et al. 2012) are all critical factors of failure.

LOM and *ETN* suffer from freeriding where, for some, short-term personal interests take precedence over the long-term greater good. The rice producers in *LOM* own their land, which means safeguarding the endemic rice variety is a dis-economic business decision. As a result, some of the members have decided to mix different rice crops, which increases per capita water consumption and, unsurprisingly, creates conflicts between members. Instituting a compliance rule was seen as an institutional burden and as an obstacle to their entrepreneurial spirit. In *ETN*, our interviewee

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attributed failures by the meta-organisation to its enormous number of members. Notably, both *LOM* and *ETN* are the largest meta-organisations in the sample. According to the literature, an increased level of coopetition can compromise interaction among members, collective actions, and collective identity – features that can spell failure for an autonomous self-normative initiative (Azzam and Berkowitz 2018; Berkowitz and Bor 2018).

LOM also appears to suffer from a lack of social learning. During an interview, one rice producer claimed:

> *We fail in applying our FNC. Small rice producers are 50 years old; they respect their own rules, the rules of nature. They didn't accept a researcher or someone telling them how to use their seeds effectively, or how much water they need to use. They are born reticent.*

This interview highlighted a critical organisational context. Those members identified as having a "medieval mindset" inject mental backwardness and poor social learning propensity into the meta-organisation, which obstructs farming partnerships based on shared principles.

DLT, GAR, CIM and *LEU* are characteristic of dormancy and inertia. According to Berkowitz and Bor (2018), the deep cause of these "ghost" meta-organisations is low entry fees for membership. If joining a meta-organisation is not expensive, enterprises will tend to participate simply because of institutional pressure. Also, the higher the number of members who are not truly committed, the higher the likelihood that the meta-organisation will suffer from inertia over the long-term. These four cases are similar in the processes by which they arrive at the inertia stage, revealing this unexpected result.

Despite their intrinsic differences related to their commons, the genesis of such meta-organisations is due to the pressure of exogenous factors, i.e. the receipt of public funds. These meta-organisations were born because of public tenders that promise awards from operating through a business network. Consequently, these meta-organisations were born to raise public funds and seek long-term public support. After an initial moment of enthusiasm, foreseeing financial opportunities, their meta-organisations started to become stuck in action, waiting for a public opportunity that never arrived. In all these cases, the commitment of the interviewees towards their meta-organisation is weak. They affirmed sentiments like: 'not knowing of the existence of an FNC', 'remembering signing a contract but not receiving any news about its evolution' to having 'forgotten its existence because of its ineffectiveness'.

Our discussion in the next section is framed through the lens of current trends in meta-organisational studies, as well as how successful factors and barriers overlap on the path through the protection, stewardship, and governance of commons.

4 Discussion

The main aim of this exploratory research is to understand the role of meta-organisations in their passage from commons protection to commons governance. With so few similar studies to refer to, our focus remained on gaining insights about the anatomy of the phenomenon and establishing an understanding of how best to proceed in studying and gathering information on the issue. This flexible methodology helped us to define a model to synthesise our findings.

As a significant contribution to the literature, we inductively developed a model that explain three developmental stages in a meta-organisation formed to protect commons that we label: protection,

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stewardship, and governance. The mix of organisational features in each of these development stages varies. Moreover, even though every FNC states protection of a commons as its mission, only two meta-organisations have evolved into a governance role – *FRA* and *PEN*. These two meta-organisations have long-term contracts, a small number of members, and are in close geographical proximity to each other, which may be correlating factors (Table 4).

[INSERT TABLE 4 HERE]

Table 4 The small local commons each FNC represents.

As a significant contribution to the literature, we offer a model that explains the phenomenon of formal meta-organisations for commons based on our findings. Figure 2 outlines the model. Each of the three stages of development we found is linked to the features that positively influence sustainability. The presence of multiple sources of information, the willingness of the members to disclose knowledge, and their enthusiasm for participating in the study served as facilitating factor in the identification of the cases with a commons governance attitude. Conversely, we faced difficulties in identifying and placing the other FNCs in this continuum, which suggests the need for more studies to disentangle the anatomy of this phenomenon as protection and stewardship overlap.

[INSERT FIGURE 2 HERE]

Figure 2 Research results: a possible framework to analyse meta-organisations for the commons

4.1 A limited number of partners

Our findings show that involving only a limited number of partners who share all the same values at both an institutional and an identity level lowers the likelihood of generating tension and freeriding behaviour (Azzam and Berkowitz 2018; Fernandez and Chiambaretto 2016). In particular, the size of the network impacts the ability of its members to adapt their organisational behaviour for coopetition. This finding is in line with a recent study by Azzam and Berkowitz (2018) on anti-commons behaviour. It also explains why *LOM*, as one of the largest meta-organisations, has not (yet) been able to transition to commons governance. Anti-commons behaviour is about members blocking the progress of a meta-organisation because they feel no one has a valid privilege to protect or advocate for that commons. These feelings tend to be tied to the potential for any one member to expand their sphere of control over the entire network. This boycotting attitude typically ends with inertia in the meta-organisation, as already discussed in the literature on the theory of collective actions (Vollan and Ostrom 2010).

4.2 Long-termism

Long-termism in meta-organisations is usually claimed as a risk factor. Over time, members can become due disaffected to the values and the social identities they once held (Ahrne and Brunsson 2005, 2008; Berkowitz and Dumez 2016). Therefore, it is somewhat unsurprising that our analysis reveals most FNCs to be short-term, even though true commons protection is a long-term undertaking. Also, unsurprising is that the meta-organisations with long-term FNCs are the only ones to have transitioned from protection to governance. This long-term orientation is related to the creation of outcomes, for which resource retrieval is necessary (Berkowitz and Bor 2018). Yet this finding does offer further support for Ostrom's theory. According to Ostrom (1998) and related comments by Araral (2014), a long-term horizon has a positive influence on the reciprocity of the relations. In turn, that reciprocity positively influences the level of cooperation among members. However, long-

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termism alone is not sufficient to explain why *FRA* and *PEN* have achieved more success because *LOM* has also been established to last for over 20 years.

4.3 Coordination and control in meta-organisations

As shown by Bor and Cropper (2016), coordination and control in meta-organisations depend on identifying critical strategic settings that translate into specific tasks and duties to achieve an overall mission. Further, these strategies must be moulded to suit the commons. What we derived from the interviews with successful cases was a general sense of belonging to the territory and an ideology that seeks a greater good for and on behalf of the commons. However, moreover, that these values are positively matched with the meta-organisation's strategic plans. This sense of belonging differentiates one meta-organisation from another (Ahrne and Brunsson 2008) and generates proactive strategic behaviour aimed at governing the commons instead of partnering with public actors (Paudyal et al. 2016). Preserving the alpine territory or restoring the prestige of a pilgrimage route now forgotten by the public are examples of such governing for the commons. In these successful cases, the members are willing to scale the dimensions of their efforts and blend their own boundaries. They engage with other meta-organisations in dialogues that include new and extrinsic subjects, as well as striving to be a flexible organisation.

In unsuccessful cases, inertia is the paradigm. The members are immobile while they wait for someone else to take action or teach them what to do. The meta-organisation's efforts are polycentric in that many independent elements must constantly adjust to comply with an evolving general system of rules in multiple layers (Araral 2014). By contrast, *PEN* and *FRA* are only overseen by two governance authorities in overlapping jurisdictions – the National Park authority and the Cultural route of the Council of Europe. Hence, achieving consensus over the conditions under which these meta-organisations can operate between members and in compliance with statutory authorities is much easier to achieve.

4.4 Developing a social learning identity

Another critical factor emerging from the results is the propensity of meta-organisations to develop a collaborative and social learning identity (Berkes 2017). This factor can be an enabler and a constraint in the case of commons. Collaborative learning identity refers to the adaptive co-management of common resources, such as complementarity in knowledge co-production (Oh and Han 2018; Zhu 2008). Of importance is the fact that social learning approaches and collaborative learning identity are interlinked in the cases we studied.

From an organisational learning perspective (Baskerville and Dulipovici 2006), *FRA* and *PEN* report in the FNC and during their interviews that generating new knowledge on the commons, through workshops, books, papers, leaflets, websites, etc., is a crucial factor. Some members are identified as leaders in disseminating knowledge, others as researchers. In all other FNCs, the manuals for coordinating members are superficial and do not explicitly reference the need for any new knowledge.

This issue can be explained by the lack of a motivating factor to enable effective organisational learning processes. As explained by Baskerville and Dulipovici (2006), organisational learning is increased by entities operating in a knowledge cluster, but the breadth of a network can compromise its effectiveness. The creation of new knowledge must be supported by the willingness of the individuals and the organisation to homogenise their shared value systems in a social setting. The representatives of *ETN* and *LOM* report that implementing a shared organisational learning scheme on a daily basis was counterproductive (Martínez-Costa et al. 2018). Here, organisational learning

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theory explains by stressing the importance of motivation for effective organisational learning and the continuous development of new knowledge as an asset for the organisation (Moustaghfir 2009; Smith et al. 1996).

As a result, *LOM* has the organisational learning barriers typical of rural contexts and the loose, informal structures of the past (Coudel et al. 2011). Ostrom claims that a collaborative learning identity is best found in terms of reciprocity that extends beyond sharing information. She defines this as the ability of some members to have flexibility in changing the rules or to engage in direct communication to bargain and negotiate such changes (Ostrom 2010, 2012).

Through social learning approaches, it is evident how much *FRA* and *PEN* have benefitted from the attitude of the members who wish to share reciprocal inter-organisational knowledge. At the same time, they share a common commitment towards the production of new knowledge for those that are outside the meta-organisation. Social learning is particularly fruitful in a rural context if the aim is to develop better sensemaking around environmental protection (Coudel et al. 2011). Also, it certainly plays a role as an enabling factor in driving meta-organisations from the protection stage to the governance stage because learning to cooperate is itself associated with the notion of governance. By consequence, in the stage of commons governance, social learning contributes to the creation, dissemination, and transfer of new knowledge about the commons. It blurs the boundaries between the meta-organisation and the external environment – sometimes to acquire political control of the commons.

5 Conclusion

This study builds on previous literature that contrasts meta-organisations with the tragedy of the commons. Our objective was to explore the ability of formal meta-organisations to protect, care for, and govern common resources. Eight FNCs in the Italian context were analysed as legal instruments for helping private organisations reach innovation, efficiency, and marketing outcomes through network arrangements. Some of these meta-organisations are oriented toward protecting commons, which offers a unique opportunity to fill gaps in the otherwise informal-network-dominated literature.

The FNC legal documents were the primary source of data for content analysis, and 12 interviews with members from each meta-organisation corroborate our findings. The results of this research make several contributions to both the theory and practice of meta-organisations. Overall, we find that the most fundamental factor in ensuring commons governance as a final outcome is a perfect match between the meta-organisation's features and the structure of the FNC. Additionally, four organisational features emerged as being critical to meta-organisational behaviour: network size, long-termism, collaborative learning identity linked to social learning, and strategic orientation. On the road to success, formal meta-organisations move through three progressive stages of development – from commons protection to commons stewardship and, finally, to commons governance. Policymakers may find this pattern useful when choosing to externalise the management of common resources by designing programs that support these stages. Of interest are the cases of meta-organisations that are moving from the initial stages to a form of commons governance that involves both public action and political control thanks to their ability to invest in social learning.

Given this study is exploratory, it has some limitations. Our sole focus on the Italian context calls for replicating the same study in other socio-economic systems, which could yield conflicting or confirmatory results. However, the need to access private legal information as a primary source of data may prove to be a barrier in these efforts. Alternatively, a cross-national comparison with other

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forms of meta-organisations would also increase knowledge of this phenomenon. Future evolutions of this study could contrast formal versus non-formal meta-organisations or meta-organisations of different compositions and structures, such as not-for-profits, individuals, or public sector agencies.

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Table 1 Rationalisation of the FNCs collected and analysed

FNC acronym	Geographical location Micro-institutional context	Main aim	Type of common good	Contract Starting date - Closing date (still active in 2019 or ended)	Number of pages of the contract	Number of companies	Number of interviews
ETN	Sicily	Valorisation of the north face of Etna volcano compromised by an unregulated and fragmented touristic access affecting the quality of the environment, nature and landscape	Landscape Volcano	Jan 2014 Jan 2024 (active)	28	35	3
PEN	Abruzzo	Manage the common good and common good resources inside and around Penne Lake	Natural reserve and lake	Oct 2011 Dec 2050 (active)	53	7	1
DLT	Emilia-Romagna	Develop networks between the respective sectors of operation and, in particular, between the fisheries and tourism sectors in the territory of the Po Delta	River and coast	Jul 2012 Jul 2016 (ended)	16	10	1
GAR	Veneto	Promoting the culture of living outdoors eco-friendly and promote the Veronese culture in all its forms	Natural environment and knowledge	Jul 2012 Dec 2015 (ended)	19	6	1
CIM	Trentino Alto Adige	Territorial valorisation for regulating the strategic tourist offer of the Alpe Cimbra	Mountain	May 2014 Sept 2016 (ended)	13	20	1
LOM	Lombardy	The protection and enhancement of the rural heritage connected to rice cultivation of Lomellina	Rice fields and landscape	Jan 2014 Dec 2034 (active)	51	36	1
FRA	Puglia	Definition of rules for usability and commercialisation of the Vie Francigene of Puglia (inside the long path from Canterbury to Jerusalem)	Pilgrimage route and its natural environment	Jan 2014 Dec 2050 (active)	19	3	3

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LEU	Campania	Valorisation of historical sites for textile mills and textile production in Sala and San Leucio of Caserta	Historical industrial site	Mar 2014 Dec 2020 (active)	9	7	1

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Table 2: Phase and procedure of the content analysis according to Elo et al. (2014)

Preparation phase	Collection of material	The universe of FNCs available at April 2017 on the website of the Union of the Italian Chambers of Commerce database
	Sampling strategy	8 FNCs were chosen by starting date. The reference to a small locally commons has been used to determine the suitability of the FNC.
	Selecting the unit of analysis	The unit of analysis is the single FNC composed by all its pages and sections
Organisation phase	Categorisation and abstraction	Codification of each section according to the analytical framework
	Interpretation	Apply categorisation based on meta-organisations and common good literature
	Representativeness	Contextualise the small locally common over its geographical boundary
Reporting phase	Reporting results	Build logic and systematically representation of the results and provide a full description of the analysis process.

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FNC acronym	Categories of members						Total number of members in the meta-organisation	Duration of the contract (in years)	Estimated area of the commons (in km2)
	Individual entrepreneur/s	SMEs	Cooperatives, social cooperatives and consortia	Large companies	Public administrations	NGOs			
ETN	12	18	4			1	35	10	1750
PEN			7				7	39	1 (lake) 10 (natural reserve)
DLT	1		9				10	4	180
GAR				5		1	6	3	(entire province of Verona is 3096)
CIM		18		1	1		20	2	105
LOM	18	15	2		1		36	20	1250
FRA		3					3	36	400 km linear
LEU		6		1			7	6	0,42
Total	*31*	*60*	*22*	*7*	*2*	*2*	***124***		

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FNC acronym	Extension of the network	Duration	Area of the commons	Effective governance of the commons	Collective actions issues (according to Ostrom 1998 and Araral 2014) (-) negative impact
ETN	Vast	Short-term	Large		A vast network (-) face-to-face exchange of information Short-term horizon (-) reciprocity (-) trust and information on the past
PEN	Small	Long-term	Small	Governance	
DLT	Vast	Short-term	Large		A vast network (-) face-to-face exchange of information Short-term horizon (-) reciprocity (-) trust and information on the past
GAR	Small	Short-term	Large		Short-term horizon (-) reciprocity
CIM	Vast	Short-term	Large		A vast network (-) face-to-face exchange of information Short-term horizon (-) reciprocity (-) trust and information on the past
LOM	Vast	Long-term	Large		A vast network (-) face-to-face exchange of information
FRA	Small	Long-term	n.d. (linear)	Governance	
LEU	Small	Short-term	Small		Short-term horizon (-) reciprocity (-) trust and information on the past

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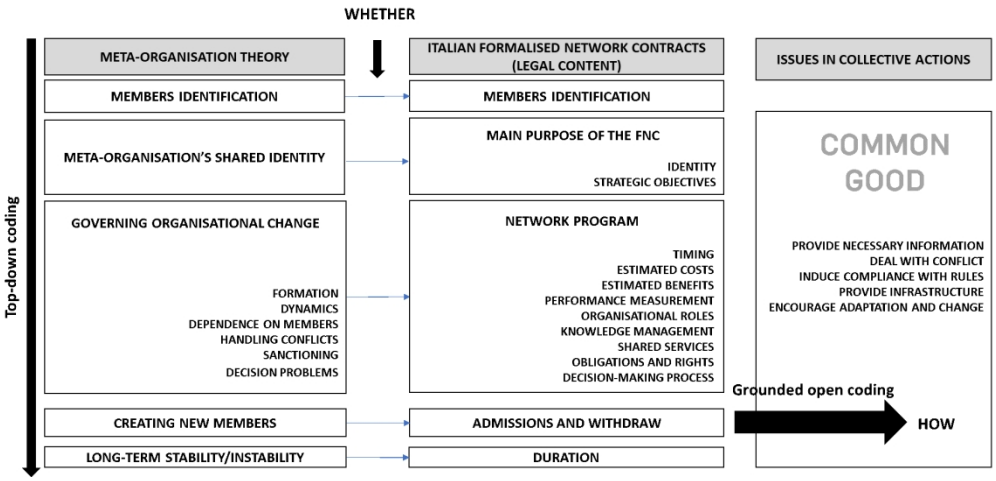
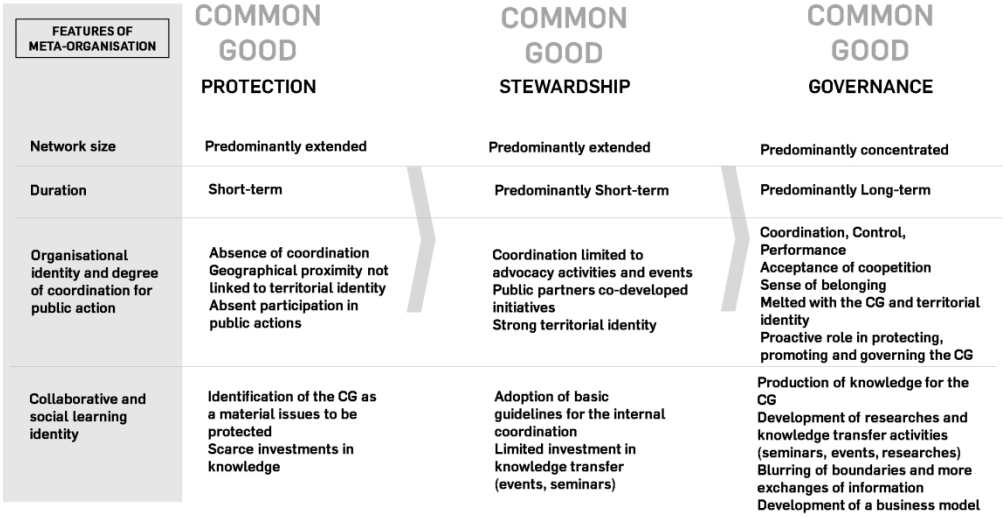


INSERT FIGURE 1 HERE



INSERT FIGURE 2 HERE