

Communities and commons: the role of community development support in sustaining the commons

Frank Van Laerhoven* and Clare Barnes

Abstract The commons literature tends to treat community development as one of the independent variables that can explain variation in commons governance outcomes. The community development literature treats community development as its primary dependent variable, and studies how it can be achieved. We feel that the obvious complementarity between both traditions has up till now not been taken full advantage of. The purpose of this paper is to begin defining a common ground where both literatures can work together. We identify a big potential and an urgent need for complementary research on questions related with community development efforts that target collective action potential and self-governance capacity of commoners.

Introduction

Communities govern the commons. Hardin (1968) famously made the case that if left to communities, commons will go to waste. However, by now both scholars and practitioners pretty much agree that communities can be very effective governors of the commons (Ostrom, 1990; Berge and Van Laerhoven 2011; Van Laerhoven and Berge, 2011).

To govern commons sustainably, communities must overcome collective action dilemmas (Olson, 1965). Commons scholarship conventionally focuses on conditions for *self-governance*, i.e. under what conditions is it more likely that communities *themselves* will effectively overcome collective action dilemmas in order to fend off the collapse of their commons? With

*Address for correspondence: Frank Van Laerhoven; email: f.s.j.vanlaerhoven@uu.nl

regard to community attributes that may affect collective-action potential, we find studies focusing on the role of *group size* (Olson, 1965; Agrawal, 2000; Agrawal and Goyal, 2001; Esteban and Debraj, 2001), *homogeneity* in values, preferences, or resources (Baland and Platteau, 1999; Fearon and Laitin, 1996; Heckathorn, 1993; Vedeld, 2000), *conflict* (Van Laerhoven and Anderson, 2013), *level of organization*, *relative autonomy* (Van Laerhoven, 2010), and *leadership* (Bianco and Bates, 1990), for example. However, in general this branch of scholarship seems less preoccupied with providing practical support to those (external) actors who seek to intervene in order to kick-start or further develop the sort of collective action at the community level that is deemed necessary to stay clear of the *tragedy of the commons* (but see Barnes and Van Laerhoven, 2013).

Community development scholarship and practice as exemplified in the *Community Development Journal* offers valuable insights regarding interventions that could lead to communities overcoming collective action dilemmas. Examples of the role that community development workers (can) play in the *building of social capital* (Islam and Morgan, 2012; Bertotti *et al.*, 2012), the *advance of leadership* (Onyx and Leonard, 2011; De la Puente, 2011), the *promotion of community participation* in decision making (Hicks, 2011; Ravensbergen and Vanderplaat, 2010), *capacity development* (Laverack and Thangphet, 2009; King and Cruickshank, 2012), and *community empowerment* (Diaz-Puente *et al.*, 2009; Tremblay and Gutherlet, 2012), are plenty in this tradition. However, at this end of the academic enterprise one seems less preoccupied with defining the goals for which communities need to ‘develop’, i.e. community development is often treated as a – rather normative – end-goal in and by itself.

The commons literature tends to treat community development as one of the independent variables that can explain variation in commons governance

		Can others use the good at the same time it is consumed by me? (“rivalrousness”)	
Is it difficult to exclude others from using the good or service? (‘excludability’)		Yes (the good is non-rivalrous – it can be used simultaneously)	No (the good is rivalrous – it cannot be used simultaneously)
	No (high excludability)	Toll- or club goods e.g. the safety provided by security services in a gated-community	Private goods e.g. a lock system on the door of your house
	Yes (low excludability)	Public goods e.g. the safety provided by police services in a street or neighborhood	Common pool resources e.g. community gardens, urban green spaces, city parks, forests

Figure 1 Typology of goods and services.

outcomes. The community development literature treats community development as its primary dependent variable, and studies how it can be achieved. We feel that the obvious complementarity between both traditions has up till now not been taken full advantage of. The purpose of this paper is to begin defining a common ground where both literatures can work together.

What is a commons?

According to a broad definition, commons are natural or human-made resource systems that are or that could be enjoyed collectively. The concept of *common pool resources* (CPR) is intimately related with the commons. CPRs are resources that produce rivalrous goods from which others cannot be easily excluded (see Figure 1).

The CPR character of a good is determined by the property regime that applies. For example, depending on the nature of such a regime, a plot of forested land can be a *toll good* (e.g. a national park for which one has to pay an entry fee in order to benefit from its beauty), a *private good* (e.g. a privately owned, fenced forest), a *public good* (e.g. park area in a city) or a *CPR* (e.g. a community forest owned and exploited by a group of people). Furthermore, it is important to distinguish the *resource system* (i.e. the stock) from the *resource units* (i.e. the flow). For example, a forest equates a *resource system*; the timber that is harvested from a forest corresponds to *resource units*. Whereas the forest system may be a commons that is governed by a group of users, the harvested timber may very well be treated as a private good by the individual appropriator. System and units are two aspects of CPRs that will probably call for different sets of property rights or ownership arrangements (Fennell, 2011).

A tragedy of the commons?

In his seminal 1968 article, Garrett Hardin asks his reader to ‘picture a pasture open to all’ (p. 1244). He shows how, when someone introduces additional cattle to a communal pasture, there is a disparity between the flows of benefits derived from the *units* and costs suffered by the *system* as a whole. The benefits flow to the herder who has more cattle on the communal grazing land (i.e. higher household income). The costs are shared among all herders (i.e. less forage, degraded pasture conditions, reduced productivity). According to Hardin, this logic leads to an unavoidable tragedy in the form of ever increasing over-exploitation and the eventual collapse of the resource. Although the metaphor refers to a meadow, many other natural and human-made resources would suffer from the same perverse incentive structure, e.g. *forests* (e.g. Gibson, MacKean, and Ostrom, 2000), *fisheries* (e.g. Acheson, 1988), but also the *internet* and *open-source software* (e.g.

Schweik and English, 2013), *knowledge* (e.g. Hess and Ostrom, 2003), *microbial commons* (e.g. Dedeurwaerdere, 2010), the *radio spectrum* (e.g. Wormbs, 2011; Heinrich-Francke, 2011), *residential buildings* (e.g. Rabinowitz, 2012), and *urban green spaces* (e.g. Matisoff and Noonan, 2012).

Hardin proposes two remedies to avoid a tragedy of the commons: Either convert the CPR into a private good (i.e. internalize the negative externalities associated with CPR use), or have an external authority (e.g. a government) impose and enforce resource-use rules. This prescription proved so powerful that it has dominated debates on policy interventions targeting the commons for over forty years, now. The natural reflex of many policy makers when confronted with a commons is to either privatize or regulate the resource.

However, in the early 1980s, a new branch of scholarship started questioning Hardin's powerful and highly influential metaphor of the *tragedy of the commons*. Noteworthy steps in the development of this new tradition include (i) a series of symposia and workshops, organized by Bonnie McCay and James Acheson in 1983 and 1984, that involved scholars with cultural as well as ecological interests, to address *The question of the commons* (McCay and Acheson, 1987); (ii) the establishment of the National Research Council (NRC) Committee on Common Property and; (iii) the organization of a conference in Annapolis, Maryland in 1985, involving many scholars from multiple disciplines and the eventual publication of many of the presented papers in a National Research Council report (National Research Council 1986). Elinor Ostrom's¹ seminal 1990 book *Governing the commons* nicely builds on the outputs of the then emerging strand of research (see Van Laerhoven and Ostrom, 2007). Research efforts got more coordinated since 1989, when the *International Association for the Study of Common Property* (IASCP) was established (in 2006, the 'P' was dropped, and the name changed into the *International Association for the Study of the Commons*).² The IASC publishes an open-access peer-reviewed journal, *the International Journal of the Commons*,³ and the *Commons Digest*,⁴ and accommodates the *Digital Library of the Commons*.⁵

Scholars involved in this school of thought concluded that numerous empirical observations simply disconfirm Hardin's claim that communities will never be able to govern a commons sustainably. Examples of long-enduring commons that are organized and governed by user communities include for example meadows in the Swiss Alps (Netting, 1981), and irriga-

1 In 2009, among other things thanks to her continued work on the commons, Elinor Ostrom won the Nobel Prize for Economics (that she shared with Oliver Williamson).

2 <http://www.iasc-commons.org/>.

3 <http://www.thecommonsjournal.org>.

4 <http://www.iasc-commons.org/commons-digest>.

5 <http://dlc.dlib.indiana.edu/dlc/>.

tion systems in Spain (Glick, 1970) and the Philippines (Lewis, 1980). By now, game theoretical, field, and experimental research has shown that Hardin's claim only holds true under very specific and limited conditions. These conditions include that participants (i) are fully anonymous, (ii) have no property rights to the resource system, (iii) cannot communicate, and (iv) lack long-term interests in a resource (Ostrom *et al.* 1994; Olson 2000; Berkes *et al.* 2006). In many real-world cases, these conditions do not (fully) apply. In sum, a tragedy of the commons is *not* the only outcome when commons governance is left to communities!

Neither markets nor state

Ostrom and Walker (2000) and Ostrom (2010) question Hardin's claim that *privatization* (the market) or (*government*) *regulation* (the state) are the only two solutions to a looming tragedy of the commons. *Privatization* often requires the division of a CPR into privatized system units. McKean (2000) lays out why this may not always be a good idea: (i) a production system may not always be amenable to physical division, (ii) communities may prefer a joint form of management due to the uncertainty of the productivity of any particular section of the resource system, (iii) if different resource users make their decisions about resource use independently and separately, they may well cause harm to each other that requires numerous, costly one-on-one negotiations to alleviate, and (iv) administrative support to enforce property rights to individual parcels may not be available. *Government regulation* takes discretion away from resource users. Fiscal federalism holds that this may not be a good idea either, as constituents and circumstances, and subsequently costs and preferences vary across jurisdictions. Efficient output levels for public goods and services differ across jurisdictions, as well. Therefore, governance regimes that are more local permit the tailoring of output to costs and preference and does an inherently better job at increasing economic welfare than any uniform, centralized system of provision (Oates, 1999; Weingast, 2009). On the spectrum that ranges from market to state, there is plenty of room for solutions that afford roles to communities and more decentralized forms of governance (see Andersson and Van Laerhoven 2007; Andersson, Gordillo and Van Laerhoven, 2009).

What is a community in the context of commons governance?

Agrawal and Gibson (1999) notice how in the study of the commons and in commons governance practices the role of communities has been revalorized. People are not any longer only seen as the cause of resource collapse, but treated

as possible allies in or even initiators of solution strategies. Although they applaud the current celebration of communities, they warn against the conventional image of communities as small-sized and territorially defined – an image inspired by Tönnies idea of *Gemeinschaft*. This vision of what they call the ‘mythical community’ fails to attend to differences within communities that are crucial to understanding processes leading to either success or failure in the governance of the commons. They propose that communities involved in governing the commons must be treated as having diverging interests (see: *attributes of the community* block in the IAD, below). The focus in research and analysis should be on the interactions or politics through which these interests emerge (see: *action arena* block in the IAD, below), and on the institutions that influence outcomes (see *rules-in-use* block, in the IAD, below).

Communities self-governing the commons?

The spectrum of governance arrangements ranges from centralized top-down provisions to decentralized forms of self-governance (Driessen *et al.*, 2012). Communities have been shown to often possess the capacity to self-govern their commons. Good self-governance of the commons requires that a community solves both *provision* and *appropriation* problems. *Provision problems* emerge when the costs of providing a common public good (i.e. the productivity of a natural or a human-made resource) are private while the benefits are shared. *Appropriation problems* emerge when benefits from harvesting resource units are private while costs are shared. Both problems require in essence that communities overcome a classical collective action dilemma. *Collective action* is the pursuit of a goal or set of goals by more than one person. One person cannot (or only with great difficulty) achieve that goal. In a collective action dilemma, the benefits associated with that goal cannot be made exclusive. Others – who have not participated in the collective action – can benefit, too (Olson, 1965). The potential of free-ridership commonly risks resulting in underinvestment in provision, and over-exploiting appropriators. Self-governance of the commons requires that communities credibly neutralize the free rider. Commons scholarship by and

Table 1. Design principles for CPR institutions (Ostrom 1990)

1	Clearly defined boundaries
2	Congruence between appropriation and provision rules and local conditions
3	Participation of resource appropriators in decision-making
4	Effective monitoring by monitors who are part of or accountable to the appropriators
5	Graduated sanctions for resource appropriators who violate community rules
6	Conflict resolution mechanism that are relatively cheap and easily accessible
7	Minimal recognition of rights to organize for communities of resource appropriators
8	Organization in the form of multiple layers of nested enterprises

large focuses on *institutions* – i.e. *the rules of the game in a society, or more formally, are the humanly devised constraints that shape human interaction* (North, 1990)—when trying to unravel collective action dilemmas (see Bartley et al., 2008).

Based on an extensive meta-analysis of successes and failures, Ostrom (1990) proposes a list of what she calls *design principles* (see Table 1). These are essential conditions that help to account for success in sustaining CPRs and gaining compliance of the rules over generations. Originally proposed in 1990, empirical research has by now largely confirmed the validity of the design principles (Cox, Arnold, and Villamayor Tomás, 2010).

The Institutional Analysis And Development (IAD) framework

To an important extent, commons scholarship has structured its research according to the *Institutional Analysis and Development* (IAD) framework that helps organizing diagnostic and prescriptive inquiry (Ostrom, 2005). The IAD framework assigns all relevant explanatory factors and variables to categories and locates these categories within a foundational structure of logical relationships (McGinnis, 2011). Its core focus is on the *action arena* where participants interact with regard to an *action situation* (e.g. the governance of a commons). In order to meaningfully study *action arenas* the IAD

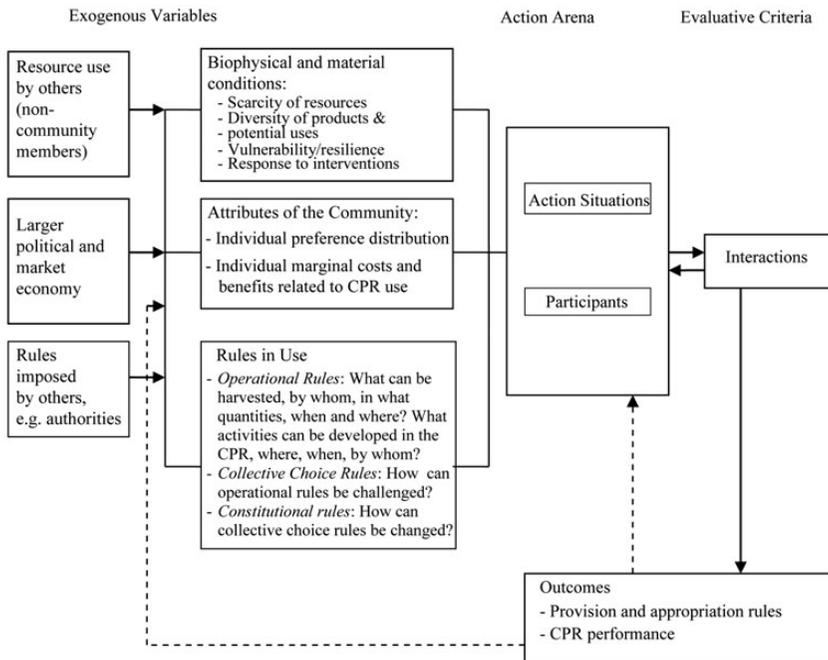


Figure 2 IAD framework (after Ostrom, 2005).

framework proposes to consider the following *exogenous variables*: (i) the bio-physical and material conditions of the resource in question, (ii) the attributes of the community, and (iii) the rules-in-use. The IAD framework allows students of the commons to take into account and make analytical sense of the complexity of sets of intervening variables that are or could be affecting outcomes of commons governance. It prevents analysts and practitioners from focusing too much on one single, isolated aspect of the process (e.g. the social and institutional side of the story), while disregarding others (e.g. the specifics of the resource). The IAD has been applied to a variety of settings such as *development aid* (Gibson *et al.*, 2005), *fisheries* (Imperial and Yandle, 2005), *forestry* (Andersson, 2006), *river basin management* (Pahl-Wostl *et al.*, 2010), and *innovation management* (Allarakhia and Walsh, 2012). Figure 2 lays out the IAD framework in a bit more detail.

A general lessons-learned about commons governance emerging from these applications is that when self-organized communities are able to develop their own institutional arrangement for regulating, monitoring and enforcing resource use they often out-perform governments (Andersson 2013). However, establishing this in an ex-post manner, still does not tell us much about the conditions that account for variation in communities' ability to actually self-organize and develop these institutional arrangements. What does it take for a community to devise or craft institutional arrangements that facilitate rule-making according to local conditions, encourage participation of appropriators in decision-making, and lead to an effective and accountable monitoring, sanctioning, and conflict resolution system? Therefore, Ostrom and Nagendra (2006) note that one of the key questions for future research on self-governance is about the types of interventions that will help support or create such local institutions. We suspect that an alliance with those writing and working on community development may be helpful in this respect.

Where can commons scholarship and the community development literature complement each other?

It is our impression that the debate on what community developers can mean for local CPR user groups has so far remained largely theoretical – i.e. we do not think that community developers' needs and requirements have been catered for sufficiently. Therefore, we do not observe many community interventions that are based on the lessons-learned from commons research.

Commons literature seems primarily preoccupied with self-governance and the search for identifying the factors that affect the success of communities governing their commons, mainly looking at rules in use, attributes of community, and features of the resource (Ostrom, 2005). But in reality the

Table 2. Critical enabling conditions for sustainability on the commons (after Agrawal, 2001)

Facilitating conditions (Agrawal, 2001)	Possibility to positively affect the conditions by means of community development efforts
1. Resource characteristics	
(i) Small size	No
(ii) Well-defined boundaries	Maybe (mapping, markers)
2. Group characteristics	
(i) Small size	No
(ii) Clearly defined boundaries	No
(iii) Shared norms	No
(iv) Past successful experiences – social capital	Maybe (supporting the self-organization related with other – less complex – issues)
(v) Appropriate leadership (young, familiar with changing external environment, connected to local traditional elite)	Maybe (providing leadership training)
(vi) Interdependence among group members	No
(vii) Heterogeneity of endowments	No
(viii) homogeneity of identities and interests	Maybe (awareness raising activities)
3. Relationship between resource system characteristics and group characteristics	
(i) Overlap between user group residential location and resource location	No
(ii) High levels of dependence by group members on resource system	No
(iii) Fairness in allocation of benefits from common resources	Maybe (advice)
4. Institutional arrangements	
(i) Rules are simple and easy to understand	Maybe (advice)
(ii) Locally devised access and management rules	Maybe (advice)
(iii) Ease in enforcement of rules	Maybe (advice)
(iv) Graduated sanctions	Maybe (advice)
(v) Availability of low cost adjudication	Maybe (offering conflict resolution support)
(vi) Accountability of monitors and other officials to users	Maybe (advice)
5. Relationship between resource system and institutional arrangements	
(i) Match restrictions on harvests to regeneration of resources	Yes (providing science based information on regeneration patterns and the expected result of restriction rules)
6. External environment	
(i) Low cost exclusion technology	Maybe (depending on the context and the availability of such technology)
(ii) Central governments should not undermine local authority	Maybe (advocacy and lobbying)
(iii) Supportive external sanctioning institutions	Maybe (advice on how to match local sanctioning rules with existing external provisions)
(iv) Appropriate levels of external aid to compensate local users for conservation activities	Maybe (depending on the available resources at the disposition of the external organization)
(v) Nested levels of appropriation, provision, enforcement and governance	Maybe (advice)

responsibility of the management of local commons under formal decentralization policies often does not lie solely with the community of commons users. State actors, international donors, NGOs, and other community developers (at all levels) are often afforded an official role in the governance of the commons. Even when not formally mentioned in regulations and government policy guidelines and documents, many community developers are involved in supporting communities in governing their commons. This is the case in community forestry in many countries such as Nepal (Agrawal and Ostrom, 2001), the Philippines (Duthy and Bolo-Duthy, 2003), Mexico (Bray, Antinori, and Torres-Rojo, 2006) and India (Sundar, 2000). Many community developers have built up a wealth of experience working with communities either specifically on governing their commons, or on the closely related community development aspects of social capital building, capacity development, empowerment, participation, and supporting community institutions.

Therefore, it is necessary to look at what the commons can learn from community development theorists and practitioners. Translating the findings of the commons literature into intervention strategies is difficult. The community development literature can offer insights into the extent to which external actors can support communities in governing their commons, and how they do this. This is a current knowledge gap in the commons literature – to what extent can external actors support communities in governing their commons?

Agrawal (2001) derives from the empirical literature a total of thirty-five factors that are claimed to affect the success of local natural resource governance. Although most of these factors do not seem manipulable by means of support interventions, we argue that some of them can be shaped through community development efforts. Table 2 provides an overview of the factors identified by Agrawal, and the extent to which they can be affected through outside organization support. If there is a lack of what Agrawal (2001) calls *critical enabling conditions for sustainability on the commons* (p. 1659) such as a lack of *homogeneity of identities or interests* or the absence of *appropriate leadership* then the commons literature tells us that it will be much harder for communities to organize themselves. We argue that some of these conditions are hard for community developers to manipulate through interventions. This leads to the question of whether community development practitioners can help communities which display the characteristics which according to the commons literature make it difficult for them to overcome collective action challenges in order to govern their commons successfully. If there is little chance of successful collective action occurring through self-governance, can community developers be expected to kick start it? This is even more relevant a question when it is understood that community development practitioners are not selecting where they work based

on knowledge of the design principles. They often work in communities which would not score highly if measured against the design principles. This could be because they have been assigned that region by a government department, or they have a history of working in the area, or the high level of environmental degradation or poverty in the area has attracted their attention.

In view of the above, we recognize a big potential and an urgent need for complementary research on questions related to community development efforts that target collective action potential and self-governance capacity of commoners.

Frank van Laerhoven is based in the Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands, where he studies environmental governance, particularly the governance of natural resources in developing countries. Although starting from the local level, he approaches governance as a multi-tiered, multi-actor affair with network characteristics. His research agenda includes an interest in commons and collective action dilemmas.

Clare Barnes is based at the Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands where she studies community forestry issues in India. Her dissertation work focuses on the role of external actors such as NGOs, donors and government agencies can and do play in community development efforts.

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