



From a Challenge to an Opportunity: Sustainability and the “Dark Side” of Social Capital in Paros, Greece

RESEARCH ARTICLE

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ABSTRACT

The role of social capital for socio-ecological systems is undisputed. While fostering cooperation in some communities, however, social capital can also lead to tight social control and distrust towards outsiders and new practices, contributing to the persistence of undesirable, unsustainable practices. This paper explores the challenges emerging from the “dark side” of social capital for sustainability efforts in socio-ecological systems, raising the question how they can be addressed and overcome. It focuses on the case of Paros, Greece, where decades of mass tourism and conventional agriculture have put a heavy burden on the socio-ecological system. In the aftermath of the 2008-2011 crisis, returnees and newcomers leaving mainland Greece brought new ideas on how to reconcile the island’s economy, ecology, and society with one another. Interviews reveal how the specifics of social capital in Paros posed structural, cognitive, and relational challenges to their projects. Surprisingly, though, those challenges could be turned into opportunities to embed new projects on the island. Promoting sustainability in socio-ecological systems may thus be less a matter of creating more social capital, but one of tailoring interventions to the specific type of social capital available.

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INTRODUCTION

The role of social capital for socio-ecological systems is undisputed (Ostrom & Ahn, 2009; Kizos et al., 2014; Henry & Dietz, 2011). In a nutshell, the sustainability of a socio-ecological system requires cooperation among community members, which is made easier by solid networks of interaction, shared mental models and institutions, and mutual trust – three key components of social capital. Yet, scholars were also quick to point out that social capital can also have a “dark side” (Newman & Dale, 2005; Graeff, 2009; McDougall & Banjade, 2015): the same social bonds and mutual trust that foster cooperation in a community may lead to tight social control and distrust towards outsiders and new practices in another community. When such negative manifestations arise, social capital contributes to the persistence of undesirable, unsustainable arrangements, hampering cooperation and preventing the establishment of sustainable practices (Putnam, 2000; van Deth & Zmerli, 2010; Kizos et al., 2014).

In line with the above, the literature on socio-ecological systems has relied extensively on social capital and its “dark side” to diagnose sustainability problems (Newman & Dale, 2005; Kizos et al., 2014; McDougall & Banjade, 2015). Little knowledge is available, though, concerning what follows once sustainability problems have been traced back to social capital. Specifically: how can cooperation be achieved despite “dark side” social capital? To address these questions, the present paper turns to the case of Paros, Greece – a well-known tourist destination in Southern Europe, characterized by a fragile ecosystem, severe sustainability problems and “dark side” social capital. In the aftermath of the 2008–2011 crisis, many young people moved to the island in search of new, more sustainable livelihoods (Benessaiah & Eakin, 2021; Benessaiah, 2021; Gkartzios, 2013), possibly providing a positive contribution to the island’s sustainability problems. Did the “dark side” of social capital on the island stand in the way? How did newcomers deal with it? Which lessons emerge from their experience?

Interviews with key informants and most initiators of sustainability projects on the island converge on the view that diverging mindsets, distrust, and a lack of possibilities for social exchange – typical negative manifestations of “dark side” social capital – hampered those efforts by newcomers to establish sustainable practices on the island. Surprisingly, though, newcomers found ways to exploit these challenges, promote cooperation, and contribute to the island’s sustainability despite “dark side” social capital. The present paper establishes a link between the challenges posed by “dark side” social capital in Paros and the attributes of sustainability projects set up by

newcomers, showing how these could be addressed and overcome.

LITERATURE REVIEW

SETTING THE STAGE: SOCIAL CAPITAL IN GREECE AND THE COUNTERURBANIZATION MOVEMENT

A substantial amount of scientific work is available that focuses on social capital in Greece, consistently characterizing Greek society as poor in social capital (Jones et al., 2016; Karametou & Apostolopoulos, 2010; Christoforou, 2005). Decades of occupation and authoritarian rule have left a legacy of distrust and individualism (Koutsou et al., 2014; Karametou & Apostolopoulos, 2010; Jones et al., 2008), while frequent social and economic instability has entrenched short-termism and eroded the willingness to invest in social relations (Christoforou, 2005). Widespread corruption, nepotism, clientelism, compounded by a prolonged crisis after 2011 have eroded trust in the state and civil society, leaving a gap which has been filled by family and informal networks (Koutsou et al., 2014; Jones et al., 2008). Limiting mutual help and trust to the extended family network has stifled innovation, making communities more vulnerable to changed circumstances (Cortinovis et al., 2017). Crucially, several scholars found that rural communities and young farmers are particularly exposed to such challenges (Koutsou et al., 2014; Daskalopoulou, 2018; Zissi et al., 2009).

The above shows how Greece represents an ideal setting to study cooperation despite “dark side” social capital. In addition to that, focusing on Paros allows us to observe how “dark side” social capital interacts with the influx of new ideas and practices. Although studies of social capital in Paros are not available, insular Greece is generally no exception to the cooperation problems above (Kizos et al. 2014; Kiouisi et al. 2020; Karampela et al. 2017). In this context, newcomers starting a new life in Paros while contributing to local sustainability represents an instance of counterurbanization, a well-studied phenomenon observed both in Greece (Benessaiah & Eakin, 2021; Gkartzios, 2013) and elsewhere (Bosworth & Bat Finke, 2020; Halfacree, 2006), focusing on urban dwellers that voluntarily take up an agrarian lifestyle without an agrarian upbringing (Wilbur, 2013). In times of crisis, urbanites tend to view the countryside as a place of resilience and solidarity (Remoundou et al., 2016). Resettling there is perceived as an act of resistance, reclaiming power from the market through practices of ecology, self-sufficiency (Wilbur, 2013), and solidarity economy (Spyridakis & Dima, 2017), often enabled by greater entrepreneurial skills (Bosworth & Bat Finke, 2020; Papadopoulos & Fratsea, 2020; Giannakis & Bruggeman, 2015).

In light of their stronger social and ecological aspirations, newcomers tend to “reinvent” local traditions and practices (Papadopoulos et al., 2019; Spyridakis & Dima, 2017), which predate mass tourism and conventional agriculture and are thus typically closer to organic agriculture and sustainable tourism. Making such products and experiences available to tourists and foreigners, however, can quickly be perceived as a commodification of local traditions, and as a violation of local norms (Galani-Moutafi, 2013), leading to tensions within the host community (Anthopoulos et al., 2017; Galani-Moutafi, 2013).

Focusing predominantly on newcomers’ relocation decisions, the counterurbanization literature has so far neglected the analysis of what follows from such decisions (Benessaiah & Eakin, 2021). That includes the nature of available social capital in host communities and the role of cooperation for newcomers’ sustainability projects. With regards to the latter, Karampela et al. (2017) find in their literature review of sustainability projects in the Aegean Islands that cooperation is consistently highlighted as a key challenge for such projects, given the little experience Greek society has with it. This is not surprising: regular businesses in rural areas are already embedded in extensive supply chains and complex information networks (Bosworth & Bat Finke, 2020). Compared to a regular business, a newcomer straying away from mass-tourism and venturing into e.g. eco-tourism will be more under pressure to source as many local, artisanal products as possible. A newcomer producing organic honey rather than regular honey will be more dependent on the farmers nearby for the chemicals they may or may not use on their fields. In a nutshell, sustainability projects are by definition more closely embedded in the local socio-ecological system, making cooperation a key necessity.

THE ANALYTICAL LENS: SOCIAL CAPITAL THEORY

Popular within socio-ecological research and even integrated in the SES framework (Ostrom, 2009; Villamayor-Tomas et al., 2020), the study of social capital can be divided in three branches. A first branch addresses social capital as a specific form of capital, complementary to human or financial capital (Bailey et al., 2019; Neelakantan et al., 2020). A second branch addresses the relative role of different forms of social capital, such as bridging, bonding, and linking social capital (Ros-Tonen & Derkyi, 2018; Dressel et al., 2020). Finally, a third branch focuses on the components of social capital, distinguishing structural, cognitive, and relational social capital (Muniady et al., 2015; Steinmo & Rasmussen, 2018). These three approaches are not mutually exclusive. This is both a curse and a blessing:

on one hand, it reveals how the literature is still very heterogeneous, lacking standard definitions and common operationalizations (Gannon & Roberts, 2020; Salisu & Hashim, 2017). At the same time, this diversity makes the concept of social capital versatile, allowing applications in different contexts and to different issues.

The present work relies on the second branch to frame the problem, and on the third to organize the analysis. Specifically, the “dark side” of social capital is best understood in relation to the distinction between bridging and bonding (and linking) social capital. Putnam (2000; 2001) introduced this distinction to explain the difference in economic performance between northern and southern Italy – the former relying on bridging social capital as a form of “lubricant” in social relations, fostering productivity and innovation; the latter being held back by a “superglue” (bonding social capital) making social relations tighter and more stable, but also ensuring that collectively detrimental practices persist, and social innovation is held at bay. This way, Putnam introduced the idea that social capital can have negative manifestations, leading to detrimental outcomes. Two decades of scholarly contributions on the matter added further distinctions. Two are most relevant here.

First, it is important to distinguish the “dark side” of social capital from bonding social capital. Negative manifestations of social capital such as tight social control, distrust towards outsiders and new practices, even open antagonism (van Deth & Zmerli, 2010; McDougall & Banjade, 2015; MacGillivray, 2018) are typically associated with bonding social capital (e.g. Newman & Dale, 2005; Kizos et al., 2014; Dressel et al., 2020). Yet, bonding social capital has proven beneficial to cooperation and community-based management (Call & Jagger, 2017; Alexander et al., 2018; Ros-Tonen & Derkyi, 2018). As a result, it is still an open question under which conditions an otherwise beneficial (bonding) social capital turns inward and develops negative manifestations (van Deth & Zmerli, 2010). Second, there is a difference between negative manifestations of social capital that lead to undesired outcomes for the community cultivating it (as in Karametou & Apostolopoulos, 2010), and a social capital that is perfectly functional but is relied upon for criminal purposes (as in Graeff, 2009). The literature refers to both as “dark side”, so it’s important to clarify that only the former is of interest here.

Having sketched the “dark side” of social capital and its negative manifestations, attention can turn to their impact on the sustainability of socio-ecological systems. Contributions on the different components of social capital are most helpful here. Despite a certain heterogeneity

within the literature (see Steinmo & Rasmussen, 2018; Sukoco et al., 2018 for more aggregated approaches; Marín et al., 2012 or Jones et al., 2014 for more fine-grained), components of social capital are typically three: networks; shared institutions and mental models; and trust. These are reflected in the three concepts of structural, cognitive, and relational social capital.

Structural social capital describes the networks through which actors in socio-ecological systems interact. Contributions typically deliver formalized network analyses, assessing social capital by computing network metrics (see Carlsson & Sandström, 2008; Alexander et al., 2018), viewing frequent interactions as necessary condition for social exchange. The frequency of interactions, however, only indicates that structural social capital is available, not whether it is beneficial or not. Social exchange is needed on top of that, exposing individuals to differences in mental models and institutions (see Paavola, 2007; Harrison et al., 2016) and setting the stage for institutional tinkering (Beinhocker, 2011). While few interactions represent a lack of structural social capital, then, negative manifestations of it correspond to frequent interactions that only reflect social control, with limited *possibility* for actual social exchange.

Cognitive social capital reflects the availability of shared mental models and, by extension, shared institutions. Structural social capital will not amount to much, unless community members understand their problems similarly and/or follow the same rules of conduct (Ostrom & Ahn, 2009; Steinmo & Rasmussen, 2018). By the same token, cognitive social capital fosters cooperation in that it lowers the transaction costs of working together, (Rudd, 2000; Steinmo & Rasmussen, 2018). Against this background, the negative manifestations of cognitive social capital restrict a community’s *ability* to cooperate under shared mental models and institutions. Furthermore, these very same mental models and institutions would prove more difficult to change if they ever became dysfunctional, both

in light of the tight social control and the lack of exposure to alternative institutions and mental models.

Relational social capital reflects the attitude community members have for others, both within and outside the community. Often equated with mutual trust, relational social capital reflects the expectations individuals in a community have about the behavior and motives of others, and the degree of reciprocity characterizing interactions with them (Warren et al., 2015; Steinmo & Rasmussen, 2018). The rationale here is to distinguish contexts dominated by opportunistic behavior from communities where individuals care for one another, since reciprocity, reputation, and mutual help are key mechanisms for cooperation (Ostrom, 1998; Henry & Dietz, 2011). From this perspective, negative manifestations of relational social capital translate into little trust within the community and/or distrust towards outsiders (leading sometimes to open antagonism, as in McDougall & Banjade, 2015), limiting the community members’ *willingness* to cooperate.

Table 1 presents structural, cognitive, and relational social capital in terms of 1) their typical manifestations; 2) the potential negative manifestations associated with the “dark side”; and 3) the challenges they pose to cooperation in a socio-ecological system. These, in a nutshell, can be summarized in a reduced *possibility*, *ability*, and *willingness* to cooperate.

Addressing these challenges is arguably a necessary step in order to foster cooperation in communities characterized by negative manifestations of social capital. Therefore, we address two research questions with this article:

- RQ1: Which specific structural, cognitive, and relational challenges emerge, when “dark-side” social capital is present?
- RQ 2: How do actors deal with them?

For answers to those questions, we turn to Paros, Greece.

ELEMENT OF SOCIAL CAPITAL	TYPICAL MANIFESTATION	NEGATIVE MANIFESTATION (“DARK SIDE”)	CHALLENGES FOR SOCIO-ECOLOGICAL SYSTEMS
Structural Social Capital	Frequent interactions within/ across communities incorporating social exchange.	Frequent interactions incorporating only few possibilities for social exchange. Tight social control.	Limited <i>possibilities</i> for cooperation, reduced exposure to different institutions.
Cognitive Social Capital	Shared mental models and institutions.	Resistance to institutional change. Limited repertoire of mental models and institutions.	Limited <i>ability</i> to cooperate, lack of alternative models, persistence of dysfunctional institutions.
Relational Social Capital	Trust and attitudes.	Distrust, antagonism, particularly towards outsiders, new ideas and practices.	Limited <i>willingness</i> to cooperate.

Table 1 Negative manifestation of structural, cognitive, and relational social capital posing challenges for socio-ecological systems.

CASE DESCRIPTION

Paros belongs to the Cyclades, a complex of 39 Greek islands in the Aegean Sea (see Figure 1). As a small island with a total area of 196 km² and 13,700 permanent residents, Paros constitutes a socio-ecological system with clear physical boundaries and easily observable socioeconomic and socio-ecological interactions (Spilanis et al., 2009; Banos-González et al., 2015). As a popular touristic destination, Paros' population increases to more than 400,000 during summer (Voivontas et al., 2003). Tourism and the resulting construction boom brought prosperity to the island, while the agricultural sector declined (cf. Voivontas et al., 2003; Marmaras & Wallace, 2016). Long-established communities, particularly the farming community, were complemented by Greek and

international newcomers and seasonal residents (Gavalas, 2014).

Demographic and economic pressures have had severe impacts on the island's ecosystem, leading to habitat and biodiversity loss, erosion, and water scarcity (Geradisi et al., 2003; Karavitis et al., 2012). The transition from an agrarian society to a tourism-based economy during the second half of the 20th century caused land abandonment and land use changes (Spilanis et al., 2009; Gavalas, 2014; Marmaras & Wallace, 2016). The intense influx of seasonal residents and visitors during the summer months overstrains and wears out local capacities and infrastructure, leading to congestion issues, waste management problems, and tensions within the community (Geradisi et al., 2003; Marmaras & Wallace, 2016; Interview 1, 3, 5, 7, 12).

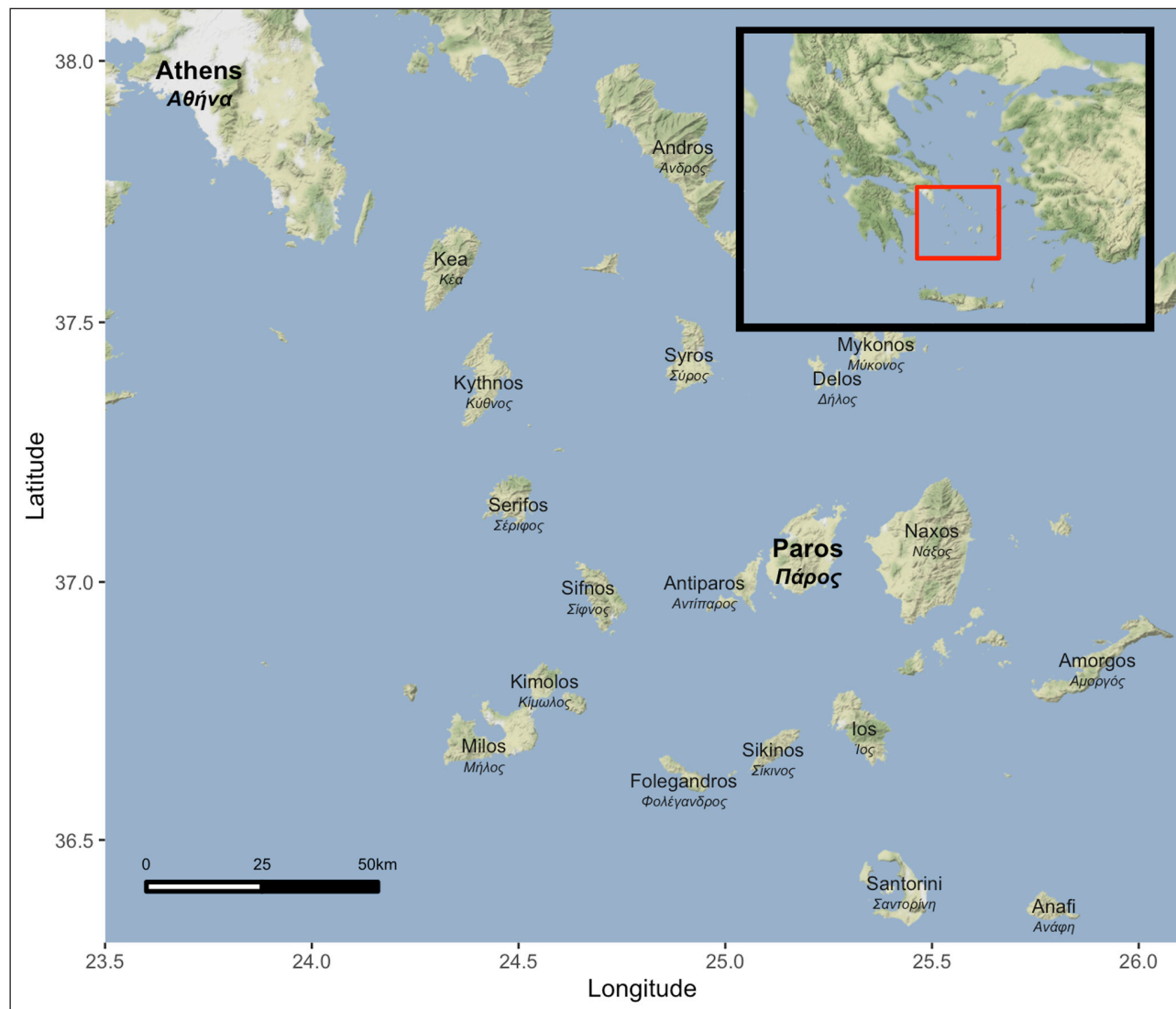


Figure 1 Location of Paros. Own elaboration obtained with R (R Core Team 2021; Auguie 2017; Santos Baquero 2019; Kahle & Wickham 2013) based on data from Wikimedia Foundation and Stamen Design available under CC BY 3.0.

Pursuing an alternative development path, several projects on the island try to achieve a better balance of economic, social, and environmental considerations. At the time of this study, most projects observed had been in operation less than 5 years, although some operate since more than 10 years. Most projects represent small-scale, private undertakings. The majority of initiators is constituted by Greek and international newcomers or returnees, people who have had prior connections to the island via family ties or property (Interview 1, 4, 5, 6, 7, 9, 10). All initiators are permanent residents. Often, they are flexible and financially secured either by personal savings, family support, private property, or other income sources, allowing them to take risks (Interview 2, 3, 5, 6, 8, 10). The main motivation for the projects varies. Only few initiators perceive themselves as environmental activists. Most initiators pursue a second career, starting a new phase in life with a stronger environmental orientation (Interview 1, 4, 5, 6, 7), often as a reaction to the 2008–2011 crisis which has brought the Greek economy to its knees (Interview 1, 4, 5, 6, 7, 9).

Living and working on a small island, long-established residents and newcomers interact frequently in daily activities. Dealing with sustainable tourism and/or organic farming in a context of mass tourism and conventional agriculture, projects are naturally affected by what happens in their surroundings (cf. Interview 1; 2; 4; 5; 6). This is further strengthened by the smallness of the island because of the close proximity caused by limited space (Interview 5; 6; 7; 8), making projects even more dependent on cooperation within the island community. Such cooperation is even more crucial in an island context, because of the considerable transaction costs of interacting with other communities (e.g. on other islands but more typically on the mainland – cf. Interview 4; 5; 6; 9; 16).

Despite its importance, cooperation with the island community remains underdeveloped, and that independently of age, gender, and origin of project initiators. Indeed, project initiators were perceived as newcomers and/or foreigners even when they were Parian returnees or had lived on the island for decades (Interview 3, 6, 10). As a result, actors engage in private, individual projects (Interview 4, 6, 7, 9, 10). Collaborative actions between projects as well as community-wide actions (tree planting, waste collection, cultural and ecological festivals) are rare (Interview 1, 4, 5, 9). Thus, cooperation on the island reflects the diffuse, polycentric provision of public goods rather than community-based management of a specific common pool resource. More importantly, the lack of cooperation despite frequent interactions proves that “dark side” social capital is at play, making Paros a suitable context for the research questions addressed herewith.

Before turning to structural, cognitive, and relational challenges (RQ1) and how projects deal with them (RQ2), however, some methodological clarifications are due.

MATERIALS AND METHODS

The present paper conducts a qualitative case study, focusing on “how” social capital and socio-ecological systems’ sustainability are linked to one another in a real-life setting (Westerink et al., 2020). The main data collection method consisted of semi-structured, in-depth interviews carried out in late 2019. The key unit of observation are “sustainability projects”: situations where individuals voluntarily contribute to the many public goods making up the island’s socio-ecological system. We searched for projects ranging from nature conservation to efforts to address plastic waste, from sustainable farming and horticultural techniques to sustainable and alternative tourism, run by non-profit organizations through volunteer and paid staff as well as by entrepreneurs and farmers with alternative business models. To be clear, “projects” are not analyzed individually in depth but are presented in the most aggregate fashion possible, both in light of confidentiality considerations in a small island context and with the aim of describing the socio-ecological system rather than its individual parts.

Desk research ahead of the fieldwork identified several potentially relevant projects, as well as several key informants knowledgeable about the island and its problems. Further projects and key informants were identified via snowballing during fieldwork meaning that respondents referred to other relevant projects and informants. Taking “projects” as the unit of observation, interview partners were selected purposefully (Yin, 2014), focusing first on project initiators and then expanding to other members of the Parian society (business owners, farmers, citizens, etc.) with the aim to 1) assess the perspective of project initiators, and subsequently 2) contextualize it through the eyes of key informants from the wider island community. Interviews were conducted until the saturation point was reached. 10 Scoping interviews with community members, including permanent and seasonal shop keepers, farmers, and other citizens provided contextual information about community life on the island. They were followed by twelve in-depth, open-ended interviews with project initiators and members ranging between 30 minutes and 1.5 hours. Interviews were conducted in English (a translator was needed in only one case), recorded and transcribed. Written documents (articles in online and print media, policy documents and reports) were also drawn upon for triangulation purposes.

While in-depth interviews with project initiators as key informants were arranged in advance, either during desk research or during fieldwork, scoping interviews with island community members were conducted more informally in tavernas, shops, or on farms. Overall, data collection yielded more than 12 hours of recorded and approximately 95,000 words (197 pages) of transcribed interview material. Of course, the limited control regarding e.g. ideal study progress, influencing variables, or clear roles of study participants which characterizes fieldwork activities (Yin, 2014) meant that the ideal sequence of interviews (main interviews first, context and triangulation later) could not be respected – i.a. because many interview partners (main interviews) were at the same time key informants in relation to other projects (context, triangulation).

As shown in Figure 2, interviews with project initiators were based on guidelines addressing: (1) the project and its characteristics; (2) the initiator’s characteristics (3) barriers and opportunities for collaboration with the island

community; (4) like-mindedness amongst project actors; and (5) relationships and trust with other members of the community. This way, interviews would allow us to relate project and initiator attributes (a, b) to structural (c), cognitive (d), and relational social capital (e), as shown in Figure 2. Specifically, main questions would allow to introduce the project (1), its initiator (2) and the challenges it faces (3-5). Follow-up questions linked such challenges to the specific attributes of each project and the initiator. It must be noted that by taking the island’s socio-ecological system as unit of analysis, we understand and assess social capital as community attribute rather than an attribute of the individual (as in Karametou & Apostolopoulos, 2010). Questions do not aim at assessing how interviewees estimate their individual relations to others but at capturing general social capital dynamics within the island community as a whole.

The collected evidence underwent an inductive thematic analysis. This was carried out manually, with the aim of

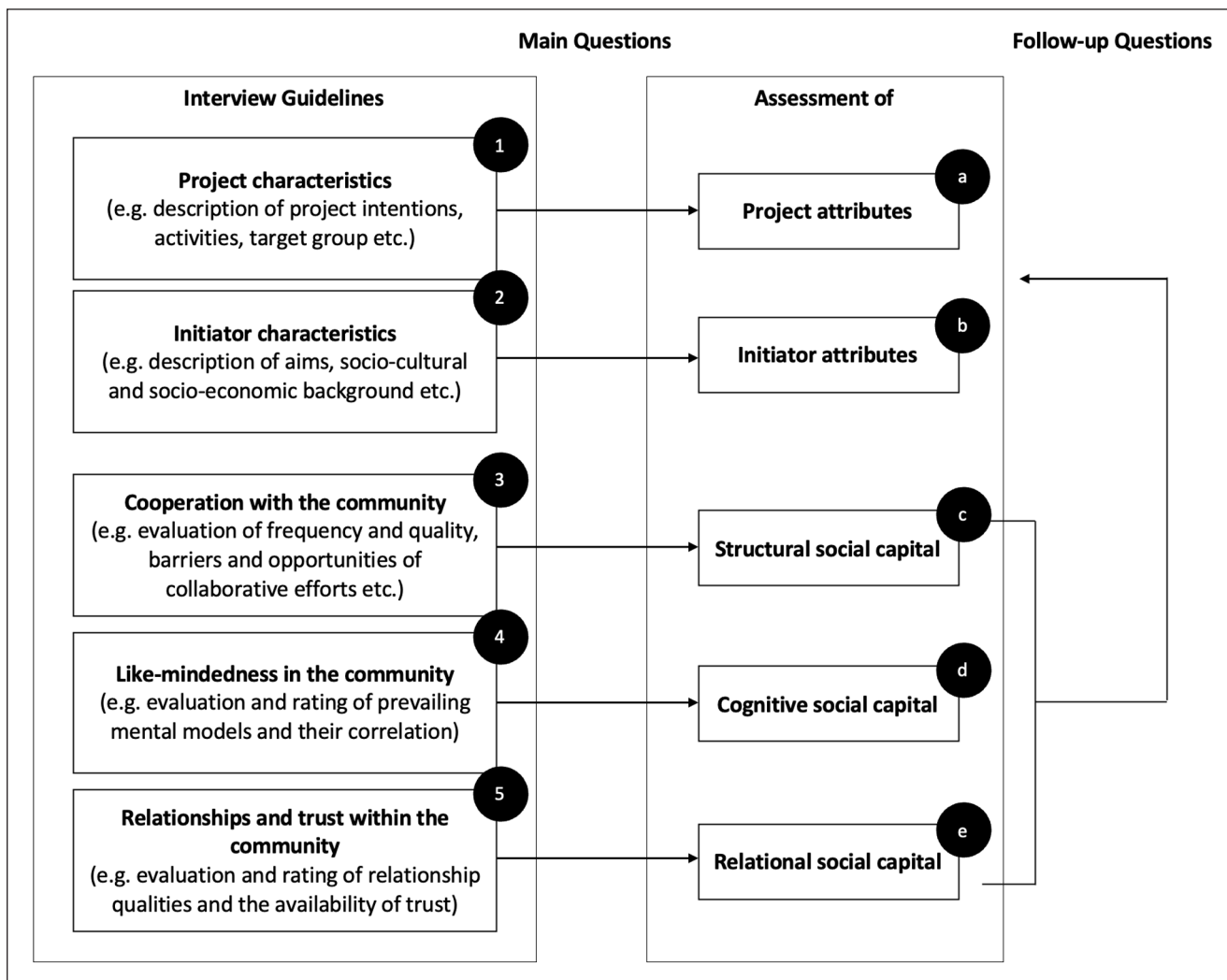


Figure 2 Link between interview guidelines and conceptual framework.

identifying and reproducing a coherent narrative reflecting the issues at stake. In other words, we were not interested in how often a certain topic appears across interviews, or whether the presence of certain project features correlates with the frequency certain challenges were mentioned. Instead, we carried out a process of meaning condensation (Brinkmann & Kvale, 2015) in order to extract the central statements implied by the wording of the interviews and written materials. To do so, software is of little use, and engagement with the empirical materials becomes more important.

RESULTS

Results are presented in two steps. First, social capital on the island will be presented by the means of structural, cognitive, and relational dimensions, highlighting the respective challenges it poses to the sustainability of the socio-ecological system (RQ1). In a second step, attention turns to how projects deal with such challenges (RQ2), showing how they turned them into opportunities.

CHALLENGES OBSERVED

Overall, the negative manifestations of social capital in conjunction with the expected challenges emerging from it as listed in Table 1 were observed in Paros. As far as structural social capital is concerned, challenges relate to the lack of possibilities for social exchange caused by seasonality (“CHALLENGE_1”). Most economic and social activities on the island are undertaken during summertime, when everybody is busy making a living for the whole year and has little time left for social relations:

“I get people that are very interested in helping me. But at the end of the day, they have their jobs, they have their lives. [...] I’m really having a hard time to create a community.” (Interview 1)

Once “the season” is over, a large number of seasonal workers leave the island, returning to their lives on the mainland. This way, seasonal workers remain outsiders to the Parian community:

“I think that I will not miss the island. Because I’m here alone, yes... I look forward to return to my mother.” (Interview 13)

Social interaction is only possible among those that stay throughout the winter. However, with most infrastructure closed and most activity stopped, possibilities for actual interaction are very limited:

“It’s really important to understand that we live in a very touristic place that almost completely dies down in action in the winter months.” (Interview 2, cf. Interview 4, 6, 9, 11)

Exchange during wintertime thus remains informal and non-committal, making it difficult to address problems collectively:

“Yeah, (...) we see each other once in a while. Usually, like volunteer events for like tree plantings and reforestation plantings [...]. But I wouldn’t say that there is something very concrete yet, that puts everyone together to do one specific thing.” (Interview 5, cf. Interview 9)

Surely, Paros’ permanent residents represent a small community, in which everybody knows everything about everybody else (Interview 1, 3, 5, 6, 9, 10, 11, 12), but informal and spontaneous encounters in public, which represent instances of structural social capital, do not translate into targeted social exchange and cooperation as an initiator highlights:

“I didn’t have a lot of people in the group or [feedback] or things. [...] But then I was out in the street having coffee and I meet people and they are like: ‘Oh, I really like your post, I am really following, is very inspiring, I really like what you do.’ [...] But the thing with the group for me it’s not – it hasn’t reached the goal I wanted because what I wanted is for people to ask, to get involved [...]” (Interview 1)

Concerning cognitive social capital, the main challenge relates to sustainability not being perceived as either feasible or desirable by the wider island community (“CHALLENGE_2”). In a nutshell, few residents understand the need for green and nature on a water scarce, barren, rock-covered island (Interview 3, 4, 6, 8, 9). Few also see the link between the island’s waste management problems and the use of disposable plastic bottles (Interview 1, 2, 3). An interviewee explains this as follows:

“Most of the local people here are somehow rooted in it [the island; authors’ note]. And they don’t ... quite possibly don’t always see the beauty of it because they never lived in the city. It’s just taken for granted.” (Interview 10)

The typical mindset highlights the wealth brought to the island by tourism compared to the poverty experienced until the seventies (Interview 3, 5, 7, 9, 10). From this point

of view, residents associate sustainable lifestyles with self-inflicted poverty rather than a way to address actual problems:

“[...] these guys, they would dream about having cars. They would have, you know, either their mules, donkeys... These were poor times. And they don’t want to think about them. [...] They don’t use their feet very much because if you are walking it means that you are poor, I guess. In their mind.” (Interview 7)

When they see the problems, they don’t perceive change as feasible:

“People [...] don’t believe that this can be reversed [...]. You can even hear things like: ‘The rocks, everybody likes us for this. So, why would you want to green it all?’” (Interview 9, cf. Interview 4)

To be clear, the actual challenge is not the difference in mindset but rather the fact that straying away from mass-tourism is perceived negatively:

“There is this school of those who only speak about the development and progress in the meaning of that progress is development: more constructions, more of everything is progress.” (Interview 3, cf. Interview 4,7,10)

Concerning relational social capital, the “dark side” manifests itself in terms of suspicion and distrust towards projects and initiators (“CHALLENGE_3”). Yoga classes can be mistaken for a cult (Interview 4), and personal commitment to certain causes can be perceived as religious fervor, turning residents away from initiatives and projects and generating further indifference (Interview 4). Past collective crises (dating as far back as the Greek-Turkish War from a century ago) have left a legacy of low generalized trust as well as low trust towards outsiders:

“I mean there is a lot of distrust in Greece, like we don’t trust in institutions, and, yeah, we don’t trust each other very often.” (Interview 9, cf. Interview 4, 5, 7, 10)

The experience of indifference and low trust represents a double challenge for projects in that it impairs networking while also leading project initiators to question the meaningfulness of their isolated efforts:

“It can be very frustrating and depressing. [...] And sometimes I thought about it. I’m like... Why am I doing this?” (Interview 1, cf. Interview 8)

On the other hand, a certain degree of open-mindedness is observed: projects will not necessarily be supported directly, but neither will they be impeded as long as they are not perceived as a threat:

“I always found that the Greek people were very broad minded in the sense of leaving you and letting you get on with what you want to do.” (Interview 10, cf. Interview 4, 6, 8)

Table 2 presents an overview of the observed challenges. Overall, it can be explicitly noted that similar challenges were reported by all interviewees. No differences were observed with regards to the type of project (agricultural, touristic or other activities) or the initiators’ socioeconomic or sociocultural background (age, gender, financial resources).

PROJECT ATTRIBUTES AS ANSWERS TO OBSERVED CHALLENGES

The above has shown how structural, cognitive, and relational aspects of social capital pose challenges to the projects. In the following, interviews with project initiators reveal how projects address such challenges and how specific aspects of their projects are best understood in light of such challenges.

ELEMENT OF SOCIAL CAPITAL	EXPECTED CHALLENGES	OBSERVED CHALLENGES
Structural Social Capital	Limited <i>possibilities</i> for cooperation, reduced exposure to different institutions.	CHALLENGE_1: lack of possibilities and structures for social exchange
Cognitive Social Capital	Limited <i>ability</i> to cooperate, lack of alternative models, persistence of dysfunctional institutions.	CHALLENGE_2: sustainability not seen as either feasible or desirable
Relational Social Capital	Limited <i>willingness</i> to cooperate.	CHALLENGE_3: suspicion and distrust

Table 2 Expected and observed challenges posed by negative manifestations of social capital on Paros.

CHALLENGE_1 pertains to the lack of possibilities and structures for social exchange. The projects address this challenge by investing in sociality, and by harnessing the lack of anonymity on the island. In terms of sociality, projects address the lack of opportunities for social exchange within the island community by investing time and resources in creating such opportunities (Interview 1, 2, 3, 4, 9). They actively contribute to organizing festivals and workshops, including and often explicitly targeting the long-established community:

“You know what was amazing about this event? That farmers that are hundreds of years here – farmers come to listen. They want to talk.” (Interview 4, cf. Interview 9)

Furthermore, project initiators are well aware that residents interact little, but that information spreads fast among island residents (Interview 2, 3, 4, 5, 6, 8, 9, 10, 11):

“It’s a small place [...] We are not so many. So, and from time to time we do some gatherings. [...] And of course it’s the internet and social media – that type. It’s interconnected. When I post something, everybody sees. When they post something, I see it.” (Interview 6, cf. Interview 2, 3, 4, 5, 8, 9, 10, 11)

They thus ensure that their projects have sufficient visibility – a key precondition for “leading by example” as shown right next.

CHALLENGE_2 pertains to the fact that long-established residents do not see a transition towards greater sustainability of the local socio-ecological system as either feasible or even desirable. Projects address this challenge by consciously avoiding a confrontational stance against the rest of the island community, trying instead to lead by example (Interview 1, 2, 4, 6, 9, 10). An interviewee elaborates on how they employ eye-catching practices for this purpose:

“So when we started putting straws on the grass, the guy over there, he was sitting and looking and a couple of days later he came and said: ‘Look, guys, I noticed that you are doing something which I never thought of. What’s the use of this?’ [...] Then he was skeptical and a day later I saw him doing the same thing. And then a year later, after, he said: ‘I mean, how stupid I am, so many years and nobody told me that is a very simple approach to make things [...]’ (Interview 6)

Avoiding moral suasion, initiators aim at proving the economic validity of their choices over time, which is

expected to have a pull-effect, also in light of the little anonymity:

“(...) most people here know each other and if you do something that you think is good or worthwhile or making you famous or bringing you more customers and I’m just across the road, well, I might start just as well doing the same.” (Interview 2, cf. Interview 6)

Furthermore, initiators are well aware of being in a privileged position, having time and resources to invest in their projects:

“I don’t need to really bother. At the beginning, I was not comfortable but after I relaxed. [...] And, I mean now I got a paid job [...], my website is developing as well. [...] I was very lucky to have this time to develop all this. Most of the people, they don’t – So, this is for me the key, I think.” (Interview 1, cf. Interview 4, 6, 9, 10)

They have an understanding for other community members that need to make a living first and do that the way they can (Interview 1, 2, 4, 6, 8, 10). Far from preaching self-exploitation for the sake of sustainability (cf. Interview 4), they aim at projecting what they do as a prospectively viable source of income, one without the downsides of mass-tourism:

“People, who do these things, don’t think ‘Ah, the island needs sustainability projects, therefore I make a sustainability project’. [...] It’s their interest to do that. Then they have to somehow make money from it, get the rewards from it in order to have the spirit to keep doing it.” (Interview 10, cf. Interview 1, 4, 5, 6, 9)

Finally, CHALLENGE_3 relates to suspicion and distrust towards outsiders and newcomers. Projects tackle this in two ways. First, they stress communality of interests, highlighting how their projects benefit the island as a whole (that is: not only project initiators or “mother earth”). Second, they highlight community and belonging in the way they organize and communicate their projects. The first point (communality of interests) is the (relational) extension of the (cognitive) point raised above concerning economic viability. Projects are not meant to restore the damage made to nature through decades of overexploitation. Rather than that, they are meant to preserve the island’s main competitive advantage: its landscape.

“People expect a certain quality but they also expect a certain atmosphere and if it suddenly turns into the middle of Athens, it’s not a Greek island anymore. And the people who come to a Greek island will stop coming.” (Interview 12; cf. Interview 3, 4, 7, 9, 11)

Projects contribute to the island looking like a Greek island also in the future – a narrative everybody on the island is likely to understand and, crucially, endorse as one’s own.

Second, projects make additional efforts to underscore their link to the island community:

“Trust is also in the fact that we live here. Ahm, we haven’t just been send here from a foreign NGO. You know, parachuted on the island to come and tell the locals in some sort of colonial way.” (Interview 2)

Initiators take pride in being permanent residents and communicate that openly:

“The reason for my coming here full-time was [that] we have property here. So, it’s not like I am an alien.” (Interview 7)

In some cases, they make the effort to stay open all year even though that’s not rational in strict financial terms:

“You know what this means? To a local? To see this is ‘open all year’? It’s very simple. It means that your money stays here.” (Interview 4)

Focusing on the off-season is a way to stress embeddedness in the community:

“For the workshops, I really would prefer it to be something more, most for locals and, ah, so it really will be something more in the wintertime.” (Interview 1)

By the same token, building social relations and community can take precedence over the substantial goals of the projects:

“[The workshop] was mostly some people coming for tea. [...] And so it was like for tea, the cookies and just to chat. We had some people, they just came to hang out. But it was very, very interesting. It was nice.” (Interview 1)

Table 3 summarizes project attributes related to the observed challenges.

DISCUSSION

The previous section has identified the challenges sustainability projects face because of the negative manifestation of social capital (RQ1), and has shown how these are addressed (RQ2). This is summarized in Table 4.

With regards to RQ1 asking which structural, cognitive, and relational challenges emerge when “dark-side” social capital is present, Table 4 shows that the “dark side” of social capital did actually manifest itself in structural, cognitive, and relational challenges – as expected. Structural challenges incorporate the lack of possibilities and structures for social exchanges, reflecting expected limited possibilities for cooperation. Cognitive challenges incorporate that sustainability is neither seen as feasible nor desirable within the island community, reflecting the expected limited ability to cooperate due to a lack of alternative models. Relational challenges incorporate the prevalence of suspicion and distrust, reflecting the expected limited willingness to cooperate.

Regarding RQ2 asking how project initiators address those challenges, Table 4 shows a broad range of project attributes that reflect such challenges and, interestingly, go well beyond that. The lack of possibilities for social interaction is not only merely compensated by actively providing such possibilities (the “investment in sociality” addressing CHALLENGE_1): it’s also exploited in order to establish relations (the “sense of community” addressing CHALLENGE_3). The lack of anonymity is not only addressed through enhanced visibility (addressing CHALLENGE_1): it is also exploited in order to “lead by example” and change attitudes towards sustainability (CHALLENGE_2) in a non-

ELEMENT OF SOCIAL CAPITAL	OBSERVED CHALLENGES	PROJECT ANSWERS
Structural Social Capital	CHALLENGE_1: lack of possibilities and structures for social exchange	Investment in sociality and visibility; harnessing the lack of anonymity.
Cognitive Social Capital	CHALLENGE_2: sustainability not seen as either feasible or desirable	Avoiding confrontation; projects portrayed as viable alternatives to mass-tourism.
Relational Social Capital	CHALLENGE_3: suspicion and distrust	Emphasis on common interests; emphasis on sense of community.

Table 3 Observed challenges and respective attributes of sustainability projects.

ELEMENT OF SOCIAL CAPITAL	EXPECTED CHALLENGES	OBSERVED CHALLENGES	PROJECT ATTRIBUTES
Structural Social Capital	Limited <i>possibilities</i> for cooperation, reduced exposure to different institutions.	CHALLENGE_1: lack of possibilities and structures for social exchange	Investment in sociality and visibility; harnessing the lack of anonymity.
Cognitive Social Capital	Limited <i>ability</i> to cooperate, lack of alternative models, persistence of dysfunctional institutions.	CHALLENGE_2: sustainability not seen as either feasible or desirable	Avoiding confrontation; projects portrayed as viable alternatives to mass-tourism.
Relational Social Capital	Limited <i>willingness</i> to cooperate, limited access to external help.	CHALLENGE_3: suspicion and distrust	Emphasis on common interests; emphasis on sense of community.

Table 4 Expected and observed challenges and respective attributes of sustainability projects.

confrontational way (CHALLENGE_3). In a nutshell, the challenges posed by the negative manifestations of social capital were actively exploited in order to further establish the projects in the island's socio-ecological system: projects faced challenges and turned them into opportunities.

Before exploring the implications of these results, it is important to highlight the limits of the present analysis. First, some considerations are due concerning the limited number of sustainability projects: 7 projects may seem too few, but they are arguably not for a community of about 14,000 stable residents. Three further projects were identified but could not be accessed for an interview. It can't be ruled out that interviews with the initiators of these projects would have led to completely new insights. Even that, however, could at best complement, but not fundamentally question the narratives above – the more so since key informants from the wider island community were relied upon in order to contextualize the interviews. It is very unlikely that the cases misrepresent the situation in Paros. Rather, they may not fully exhaust the diversity of specific challenges emerging from “dark side” social capital, apart from covering all its three components.

Furthermore, the possibility to generalize from the Paros case study needs clarification. Results presented here are well in line with the available literature on social capital in Greece (Jones et al., 2014; Kizos et al., 2014; Koutsou et al., 2014). This is important because generalizing from a qualitative case study is a matter of analytical (and not statistical) representativeness: whether a case study clearly observes an instance of the phenomenon at stake (Yin, 2014). The negative manifestations of social capital are both expected and observed in Paros. As a result, cases with similar characteristics, where social capital limits the possibility, ability, and willingness of community members to cooperate (in insular Greece or elsewhere) can draw lessons from the Paros case.

Our results have implications for both theory and practice. Concerning theory, several considerations are noteworthy. First and foremost, Crona et al. (2017) suggest that social capital is a latent variable rather than a direct

driver of cooperation. The present analysis expands that by relying on social capital for contextualization (specifically: case selection). The key question is indeed not *whether* cooperation or a lack thereof can be explained by social capital, but *how* negative manifestations of it shape efforts to address sustainability. Several strategies are identified, answering those calls from the literature concerning the role of mechanisms in the study of social capital (Alexander et al., 2018; Crona et al., 2017; Henry & Dietz, 2011).

A second implication relates to the role of structural, cognitive, and relational social capital. Scholars acknowledge the multidimensional nature of social capital (Call & Jagger, 2017; Ido, 2019; Westerink et al., 2020), yet they often focus on structural aspects alone (Carlsson & Sandström, 2008; Crona et al., 2017; Alexander et al., 2018), assuming that frequent interactions are enough to foster cooperation. The present paper shows instead how structural social capital (“investment in sociality” and “high visibility”) carries along cognitive (“leading by example”) and relational elements (“sense of community”) that transcend the frequency of interactions. This casts a long shadow on those assumptions of transitivity (“the tendency of friends of a friend to also be friends” as in Alexander et al., 2018:522; see also Henry & Dietz, 2011) inferring cooperation from structural social capital alone, without cognitive and relational considerations.

Further implications are more specific to the study of common pool resources. First, the link between social capital, cooperation, and sustainability is typically addressed in the context of individual common pool resources and community-based management (Alexander et al., 2018; Carlsson & Sandström, 2008; Westerink et al., 2020). The present analysis shows how the concept can be put to work also in the broader context of socio-ecological systems, answering previous calls in these respects (Henry & Dietz, 2011). Second, the Paros case raises questions about the role of long-established communities in the sustainable management of socio-ecological systems. Work on common-pool resources typically puts the local community center stage (Ostrom, 1990; Call & Jagger, 2017; Alexander

et al., 2018), yet not all local communities have the cognitive and relational social capital they need for cooperation even at the local level. By the same token, managing shared resources sustainably may require borrowing institutions and mental models from newcomers or even outsiders – a seldom perspective in socio-ecological research.

On a similar line, the present work answers recent calls from the counterurbanization literature, with its strong emphasis on motivations and mindsets of newcomers but a comparatively less attention to later interactions with the host community (Benessaiah & Eakin, 2021). Our case study provides a closer look into those processes. An interesting but underinvested aspect herein lies in the role of newcomers' heterogeneity. Our results did not detect significant differences in the challenges newcomers faced – regardless of age, gender, socioeconomic background, or place of origin. This knowledge gap represents an important point of reference for future research.

Leaving research implications aside, questions remain about what communities can learn for the sustainability of their own socio-ecological systems, when facing the negative manifestations of “dark side” social capital. First, project attributes provide an important starting point for those individual efforts addressing sustainability problems: avoiding confrontation, leading by example, investing in sociality and stressing economic viability are strategies that can be replicated elsewhere, and stand in contrast to more activist approaches to preserving shared resources. Second, the case stands in contrast to the tendency to build more social capital, suggesting instead that the social capital already available may be good enough to support local projects, if these feature the right attributes. This may be particularly relevant for the work of external agencies in the realm of conservation and rural development, which may mistake the negative manifestations of social capital for a lack of social capital, and/or may mistake frequent interactions with actual social exchange. Diagnostic tools may be revised accordingly.

CONCLUSION

The present paper has addressed the “dark side” of social capital and the challenges it poses to the sustainability of a socio-ecological system. After spelling out such challenges in terms of their structural, cognitive, and relational aspects, the question was raised whether such challenges could be observed empirically and how they can be addressed. Through a case study from Paros, Greece, the paper introduces several projects promoting sustainability on the island, ranging from nature conservation to waste

management, organic agriculture, and sustainable tourism. Interviews with project initiators, residents, and various key informants reveal that, indeed, projects experienced the negative manifestations of social capital.

Several project features could be identified addressing such challenges. Next to attending to their core business, projects actively invested in sociality, addressing the structural challenges of superficial and non-committal interactions posed by the social capital characterizing the island community. This investment in sociality is closely intertwined with investments in cognitive and relational social capital. To overcome barriers of cognitive social capital, they also present themselves as viable, alternative livelihoods, consciously avoiding a confrontational stance with a community which is not like-minded. Finally, they underscore communality of interests and sense of community, addressing relational challenges. Overall, projects exploit these challenges to further establish their place on the island, effectively turning a challenge into an opportunity for the sustainability of the local socio-ecological system.

Lessons for theory and practice can be drawn from this: under certain circumstances, promoting sustainability may be a matter of tailoring interventions to the right type of social capital available locally, rather than building it anew. In other words, there may be less need for community building than presently assumed, and more need for careful, nuanced diagnosis of the social capital available, designing interventions accordingly. To see that, however, one needs to look past network structures and address cognitive and relational social capital as well.

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The authors have no competing interests to declare.

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REFERENCES

- Alexander, S. M., Bodin, Ö., & Barnes, M. L.** (2018). Untangling the drivers of community cohesion in small-scale fisheries. *International Journal of the Commons*, 12(1), 519–547. DOI: <https://doi.org/10.18352/ijc.843>
- Anthopoulou, T., Kaberis, N., & Petrou, M.** (2017). Aspects and experiences of crisis in rural Greece. Narratives of rural resilience. *Journal of Rural Studies*, 52, 1–11. DOI: <https://doi.org/10.1016/j.jrurstud.2017.03.006>
- Auguie, B.** (2017). gridExtra: Miscellaneous Functions for “Grid” Graphics. R package version 2.3. URL: <https://CRAN.R-project.org/package=gridExtra>
- Bailey, K. M., McCleery, R. A., & Barnes, G.** (2019). The role of capital in draught adaptation among rural communities in Eswatini. *Ecology & Society*, 24(3), 8. DOI: <https://doi.org/10.5751/ES-10981-240308>
- Banos-González, I., Martínez-Fernández, J., & Esteve-Selma, M. A.** (2015). Dynamic integration of sustainability indicators in insular socio-ecological systems. *Ecological Modelling*, 306, 130–144. DOI: <https://doi.org/10.1016/j.ecolmodel.2014.08.014>
- Beinhocker, E. D.** (2011). Evolution as computation: Integrating self-organization with generalized Darwinism. *Journal of Institutional Economics*, 7(3), 393–423. DOI: <https://doi.org/10.1017/S1744137411000257>
- Benessaiah, K.** (2021) Reconnecting to nature amidst crisis: harnessing capacities and mobilities for livelihood and land transformations in the Greek back-to-the-land trend. *Journal of Rural Studies*, 84, 76–89. DOI: <https://doi.org/10.1016/j.jrurstud.2021.02.005>
- Benessaiah, K., & Eakin, H.** (2021). Crisis, transformation, and agency: Why are people going back-to-the-land in Greece? *Sustainability Science*, 16, 1841–1858. DOI: <https://doi.org/10.1007/s11625-021-01043-5>
- Bosworth, G., & Bat Finke, H.** (2020). Commercial Counterurbanisation: A driving force in rural economic development. *Environment and Planning A: Economy and Space*, 52(3), 654–674. DOI: <https://doi.org/10.1177/0308518X19881173>
- Brinkmann, S., & Kvale, S.** (2015). *InterViews. Learning the craft of qualitative research interviewing* (3rd ed.). SAGE Publications.
- Call, M., & Jagger, P.** (2017). Social capital, collective action and communal grazing lands in Uganda. *International Journal of the Commons*, 11(2), 854–876. DOI: <https://doi.org/10.18352/ijc.761>
- Carlsson, L., & Sandström, A.** (2008). Network governance of the commons. *International Journal of the Commons*, 2(1), 33–54. DOI: <https://doi.org/10.18352/ijc.20>
- Christoforou, A.** (2005). On the Determinants of Social Capital in Greece Compared to Countries of the European Union. *Nota di Lavoro*, No. 68.2005. Milano: Fondazione Eni Enrico Mattei (FEEM). DOI: <https://doi.org/10.2139/ssrn.726142>
- Cortinovis, N., Xiao, J., Boschma, R., & van Oort, F. G.** (2017). Quality of government and social capital as drivers of regional diversification in Europe. *Journal of Economic Geography*, 17(6), 1179–1208. Scopus. DOI: <https://doi.org/10.1093/jeg/lbx001>
- Crona, B., Gelcich, S., & Bodin, Ö.** (2017). The importance of interplay between leadership and social capital in shaping outcomes of rights-based fisheries governance. *World Development*, 91, 70–83. DOI: <https://doi.org/10.1016/j.worlddev.2016.10.006>
- Daskalopoulou, I.** (2018). Civic participation and soft social capital: Evidence from Greece. *European Political Science*, 17(3), 404–421. DOI: <https://doi.org/10.1057/s41304-017-0114-y>
- Dressel, S., Johansson, M., Ericsson, G., & Sandström, C.** (2020). Perceived adaptive capacity within a multi-level governance setting: The role of bonding, bridging, and linking social capital. *Environmental Science & Policy*, 104, 88–97. DOI: <https://doi.org/10.1016/j.envsci.2019.11.011>
- Galani-Moutafi, V.** (2013). Rural space (re)produced – Practices, performances and visions: A case study from an Aegean island. *Journal of Rural Studies*, 32, 103–113. DOI: <https://doi.org/10.1016/j.jrurstud.2013.04.007>
- Gannon, B., & Roberts, J.** (2020). Social capital: exploring the theory and empirical divide. *Empirical Economics*, 58, 899–919. DOI: <https://doi.org/10.1007/s00181-018-1556-y>
- Gavalas, V. S.** (2014). The History of family and community life through the study of civil registers. Paros in the 20th century. *The History of the Family*, 19(2), 145–164. DOI: <https://doi.org/10.1080/1081602X.2013.856808>
- Geradisi, A., Katsiardi, P., Papaefstathiou, N., Manoli, E., & Assimacopoulos, D.** (2003). Cost-effectiveness analysis for water management in the Island of Paros, Greece [paper presentation]. 8th International Conference on Environmental Science and Technology, Lemnos Island, Greece. <http://arid.chemeng.ntua.gr/Project/Uploads/Doc/WSM/Publications/Cost-effectiveness%20for%20water%20>

management%20in%20the%20island%20of%20Paros,%20Greece.pdf

- Giannakis, E., & Bruggeman, A.** (2015). Economic crisis and regional resilience: Evidence from Greece. *Papers in Regional Science*, 96(3), 451–476. DOI: <https://doi.org/10.1111/pirs.12206>
- Gkartzios, M.** (2013). 'Leaving Athens': Narratives of counterurbanisation in times of crisis. *Journal of Rural Studies*, 32, 158–167. DOI: <https://doi.org/10.1016/j.jrurstud.2013.06.003>
- Graeff, P.** (2009). Social capital. The dark side. In G. Tinggaard Svendsen & G. L. Haase Svendsen (Eds.), *Handbook of social capital. The trioka of sociology, political science and economics* (pp. 143–161). Edward Elgar.
- Halfacree, K.** (2006). From dropping out to leading on? British counter-cultural back-to-the-land in a changing rurality. *Progress in Human Geography*, 30(3), 309–336. DOI: <https://doi.org/10.1191/0309132506ph609oa>
- Harrison, J. L., Montgomery, C. A., & Bliss, J. C.** (2016). Beyond the monolith. The role of bonding, bridging, and linking social capital in the cycle of adaptive capacity. *Society & Natural Resources*, 29(5), 525–539. DOI: <https://doi.org/10.1080/08941920.2015.1103389>
- Henry, A., & Dietz, T.** (2011). Information, networks, and the complexity of trust in commons governance. *International Journal of the Commons*, 5(2), 188–212. DOI: <https://doi.org/10.18352/ijc.312>
- Ido, A.** (2019). The effect of social capital on collective action in community forest management in Cambodia. *International Journal of the Commons*, 13(1), 777–803. DOI: <https://doi.org/10.18352/ijc.939>
- Jones, N., Koukoulas, S., Clark, J. R. A., Evangelinos, K. I., Dimitrakopoulos, P. G., Eftihidou, M. O., Koliou, A., Mpalaska, M., Papanikolaou, S., Stathi, G., & Tsaliki, P.** (2014). Social capital and citizen perceptions of coastal management for tackling climate change impacts in Greece. *Regional Environmental Change*, 14, 1083–1093. DOI: <https://doi.org/10.1007/s10113-013-0540-5>
- Jones, N., Malesios, C., Iosifides, T., & Sophoulis, C. M.** (2008). Social Capital in Greece: Measurement and Comparative Perspectives. *South European Society and Politics*, 13(2), 175–193. DOI: <https://doi.org/10.1080/13608740802156687>
- Jones, N., Proikaki, M., & Roumeliotis, S.** (2016). Social capital levels in Greece in times of crisis. In *Austerity and the Third Sector in Greece* (pp. 45–60). Routledge. DOI: <https://doi.org/10.4324/9781315568348-10>
- Kahle, D., & Wickham, H.** (2013). ggmap: Spatial Visualization with ggplot2. *The R Journal*, 5(1), 144–161. URL: <http://journal.r-project.org/archive/2013-1/kahle-wickham.pdf>. DOI: <https://doi.org/10.32614/RJ-2013-014>
- Karametou, P., & Apostolopoulos, C.** (2010). The Causal Nexus Between Social Capital and Local Development in Mountain Rural Greece. *International Journal of Social Inquiry*, 3(1), 29–66. <https://dergipark.org.tr/en/pub/ijis/issue/17732/185726>
- Karampela, S., Papazoglou, C., Kizos, T., & Spilanis, I.** (2017). Sustainable local development on Aegean Islands: A meta-analysis of the literature –. *Island Studies Journal*, 12(1), 71–94. DOI: <https://doi.org/10.24043/isj.6>
- Karavitis, C. A., Skondras, N. A., Manoli, E., & Assimacopoulos, D.** (2012). Assessing alternative water resources management scenarios in islands of the Aegean archipelago, Greece. *Global NEST Journal*, 14(3), 264–275. DOI: <https://doi.org/10.30955/gnj.000886>
- Kioui, A. V., Konidi, M., & Rublova, D.** (2020). 15 Isolation, individualism and sharing. In T. Kuttler & M. Moraglio (Eds.). *Re-thinking Mobility Poverty: Understanding Users' Geographies, Backgrounds and Aptitudes* (1st ed.). Routledge. DOI: <https://doi.org/10.4324/9780367333317>
- Kizos, T., Detsis, V., Iosifides, T., & Metaxakis, M.** (2014). Social capital and social-ecological resilience in the Asteroussia Mountains, southern Crete, Greece. *Ecology and Society*, 19(1), 40. DOI: <https://doi.org/10.5751/ES-06208-190140>
- Koutsou, S., Partalidou, M., & Ragkos, A.** (2014). Young farmers' social capital in Greece: Trust levels and collective actions. *Journal of Rural Studies*, 34, 204–211. DOI: <https://doi.org/10.1016/j.jrurstud.2014.02.002>
- MacGillivray, B.** (2018). Beyond social capital: the norms, belief systems, and agency embedded in social networks shape resilience to climatic and geophysical hazards. *Environmental Science and Policy*, 89, 116–25. DOI: <https://doi.org/10.1016/j.envsci.2018.07.014>
- Marín, A., Gelcich, S., Castilla, J. C., & Berkes, F.** (2012). Exploring social capital in Chile's coastal benthic comanagement system using a network approach. *Ecology and Society*, 17(1), 13. DOI: <https://doi.org/10.5751/ES-04562-170113>
- Marmaras, E. V., & Wallace, A.** (2016). Residential tourism and economic migration. Both sides of the same population movement on the Greek Islands of Cyclades in the turn of the twenty-first century. *Journal of the Knowledge Economy*, 9, 1477–1488. DOI: <https://doi.org/10.1007/s13132-016-0433-1>
- McDougall, C., & Banjade, M. R.** (2015). Social capital, conflict, and adaptive collaborative governance: exploring the dialectic. *Ecology and Society*, 20(1), 44. DOI: <https://doi.org/10.5751/ES-07071-200144>
- Muniady, R., Al Mamun, A., Mohamad, M. R., Permarupan, Y., & Zainol, N. R. B.** (2015). The effect of cognitive and structural social capital and micro-enterprise performance. *Sage Open*, 5(4), 2158244015611187. DOI: <https://doi.org/10.1177/2158244015611187>
- Neelakantan, A., DeFries, R., Sterling, E., & Naeem, S.** (2020). Contributions of financial, social and natural capital to food security around Kanha National Park in central India.

- Regional Environmental Change*, 20, 26. DOI: <https://doi.org/10.1007/s10113-020-01589-7>
- Newman, L. L., & Dale, A.** (2005). Network structure, diversity, and proactive resilience building: a response to Tompkins and Adger. *Ecology and Society*, 10(1), r2. [online] URL: <http://www.ecologyandsociety.org/vol10/iss1/resp2/>. DOI: <https://doi.org/10.5751/ES-01396-1001r02>
- Ostrom, E.** (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511807763>
- Ostrom, E.** (1998). A behavioural approach to the rational choice theory of collective action. *The American Political Science Review*, 92(1), 1–22. DOI: <https://doi.org/10.2307/2585925>
- Ostrom, E.** (2009). A general framework for analyzing sustainability of social-ecological systems. *Science*, 325(5939), 419–422. DOI: <https://doi.org/10.1126/science.1172133>
- Ostrom, E., & Ahn, T. K.** (2009). The meaning of social capital and its link to collective action. In G. Tinggaard Svendsen & G. L. Haase Svendsen (Eds.), *Handbook of Social Capital. The Troika of Sociology, Political Science and Economics* (pp. 17–35). Edward Elgar. DOI: <https://doi.org/10.4337/9781848447486.00008>
- Paavola, J.** (2007). Institutions and environmental governance: A reconceptualization. *Ecological Economics*, 63, 93–103. DOI: <https://doi.org/10.1016/j.ecolecon.2006.09.026>
- Papadopoulos, A. G., Fratsea, L., Karanikolas, P., & Zografakis, S.** (2019). Reassembling the Rural: Socio-Economic Dynamics, Inequalities and Resilience in Crisis-Stricken Rural Greece. *Sociologia Ruralis*, soru.12252. DOI: <https://doi.org/10.1111/soru.12252>
- Papadopoulos, A. G., & Fratsea, L.-M.** (2020). Transformative mobilities and resilience dynamics in rural coastal Greece in a time of recession. In F. N. Döner, E. Figueiredo, & M. J. Rivera (Eds.), *Crisis and Post-Crisis in Rural Territories* (pp. 141–162). Springer. DOI: https://doi.org/10.1007/978-3-030-50581-3_8
- Putnam, R.** (2000). *Bowling alone. The collapse and revival of American community*. Simon & Schuster. DOI: <https://doi.org/10.1145/358916.361990>
- Putnam, R.** (2001). Social capital: Measurement and consequences. *Canadian Journal of Policy Research*, 2(1), 41–51.
- R Core Team.** (2021). R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing. URL: <https://www.R-project.org/>
- Remoundou, K., Gkartzios, M., & Garrod, G.** (2016). Conceptualizing Mobility in Times of Crisis: Towards Crisis-Led Counterurbanization? *Regional Studies*, 50(10), 1663–1674. DOI: <https://doi.org/10.1080/00343404.2015.1057561>
- Ros-Tonen, M. A. F., & Derkyi, M.** (2018). Conflict or cooperation? Social capital as a power resource and conflict mitigation strategy in timber operations in Ghana's off-reserve forest areas. *Ecology & Society*, 23(3), 44. DOI: <https://doi.org/10.5751/ES-10408-230344>
- Rudd, M. A.** (2000). Live long and prosper. Collective action, social capital and social vision. *Ecological Economics*, 34(234), 131–144. DOI: [https://doi.org/10.1016/S0921-8009\(00\)00152-X](https://doi.org/10.1016/S0921-8009(00)00152-X)
- Salisu, I., & Hashim, N.** (2017). A critical review of scales used in social capital research. *IOSR Journal of Business and Management*, 19(4), 34–40. DOI: <https://doi.org/10.9790/487X-1904033440>
- Santos Baquero, O.** (2019). ggsm: North Symbols and Scale Bars for Maps Created with 'ggplot2' or 'ggmap'. R package version 0.5.0. URL: <https://CRAN.R-project.org/package=ggsm>
- Spilanis, I., Kizos, T., Koulouri, M., Kondyli, J., Vakoufaris, H., & Gatsis, I.** (2009). Monitoring sustainability in insular areas. *Ecological Indicators*, 9, 179–187. DOI: <https://doi.org/10.1016/j.ecolind.2008.03.003>
- Spyridakis, M., & Dima, F.** (2017). Reinventing traditions: Socially produced goods in Eastern Crete during economic crisis. *Journal of Rural Studies*, 53, 269–277. DOI: <https://doi.org/10.1016/j.jrurstud.2017.04.007>
- Steinmo, M., & Rasmussen, E.** (2018). The interplay of cognitive and relational social capital dimensions in university-industry collaboration. Overcoming the experience barrier. *Research Policy*, 47, 1964–1974. DOI: <https://doi.org/10.1016/j.respol.2018.07.004>
- Sukoco, B. M., Hardi, H., & Qomariyah, A.** (2018). Social capital, relational learning, and performance of suppliers. *Asia Pacific Journal of Marketing and Logistics*, 30(2), 417–437. DOI: <https://doi.org/10.1108/APJML-02-2017-0022>
- Van Deth, J. W., & Zmerli, S.** (2010). Introduction. Civiness, equality, and democracy – a “dark side” of social capital? *American Behavioural Scientist*, 53(3), 631–639. DOI: <https://doi.org/10.1177/0002764209350827>
- Villamayor-Tomas, S., Oberlack, C., Epstein, G., Partelow, S., Roggero, M., Kellner, E., Tschopp, M., & Cox, M.** (2020). Using case study data to understand SES interactions: a model-centered meta-analysis of SES framework applications. *Current opinion in environmental sustainability*, 44, 48–57. DOI: <https://doi.org/10.1016/j.cosust.2020.05.002>
- Voivontas, D., Arampatzis, G., Manoli, E., Karavitis, C., & Assimacopoulos, D.** (2003). Water Supply Modelling Towards Sustainable Environmental Management in Small Islands: The Case of Paros, Greece. *Desalination*, 156, 127–135. DOI: [https://doi.org/10.1016/S0011-9164\(03\)0335-7](https://doi.org/10.1016/S0011-9164(03)0335-7)
- Warren, A. M., Sulaiman, A., & Jaafar, N. I.** (2015). Understanding civic engagement behaviour on Facebook from a social capital theory perspective. *Behaviour & Information Technology*, 34(2), 163–175. DOI: <https://doi.org/10.1080/1044929X.2014.934290>
- Westerink, J., Termeer, C., & Manhoudt, A.** (2020). Identity conflict? Agri-environmental collectives as self-governing

groups of farmers or as boundary organisations.

International Journal of the Commons, 14(1), 388–403. DOI: <https://doi.org/10.5334/ijc.997>

Wilbur, A. (2013). Growing a Radical Ruralism: Back-to-the-Land as Practice and Ideal: Growing a radical ruralism. *Geography Compass*, 7(2), 149–160. DOI: <https://doi.org/10.1111/gec3.12023>

Yin, R. K. (2014). *Case study research. Design and methods* (5th ed.). SAGE Publications.

Zissi, A., Tseloni, A., Skapinakis, P., Savvidou, M., & Chiou, M. (2009). Exploring social capital in rural settlements of an islander region in Greece. *Journal of Community & Applied Social Psychology*, 20(2), 125–138. DOI: <https://doi.org/10.1002/casp.1024>

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