CHAPTER 5

Researching the Social Value of the Intellectual Commons: Methodology and Design

5.1. Introduction

The previous chapter described the historical significance of the commons for art and culture. The current chapter is the methodological part of a social research endeavour on the political economy of the intellectual commons, focusing on the circulation of commons-based values. The aim of this research is to identify the contemporary revelations of the relations of commonification in the circulation of social value and, thus, grasp the actual formations of the intellectual commons, both offline and online, in the current socio-historical context. The research decrypts the generation, circulation, pooling together and redistribution of social value observed in the intellectual commons communities of the sample, with the aim of showing the importance of the intellectual commons for social reproduction. By providing solid empirical evidence that the communities of the intellectual commons generate and redistribute social values to society, the social research part of the book thus supports its overall normative argumentation that the intellectual commons have significant moral value, which justifies their independent protection and promotion by the law.

  This chapter sets out the methodological bases and the design of the research in the next three sections. The first of these spells out the methodological orientation of the research. The second unveils the design of the research. The third describes the coding process followed in relation to data collected from the eight Greek intellectual commons communities, which constitute the sample of the current research. The current chapter is then followed by chapters on the findings and conclusions of the research.

5.2. Research Theory

The current research project adheres to a critical realist epistemology. Through the critical realist prism, the mission of scientific research with regard to the intellectual commons is the examination of the causal mechanisms framing the events, activities and social phenomena within their context (Archer et al. 1998, xi–xii; Fletcher 2017, 183). Such causal mechanisms are not conceived as natural phenomena disconnected for their socio-historical context but rather as contingent social products, being in themselves dependent on social activity for the manifestation of their outcomes (Bhaskar 1979, 48). The underlying purpose is thus to ascertain the tendencies of the intellectual commons, unveil the general causal mechanisms of commonification and explore the specific formations of the intellectual commons in their dialectical relation with capital.

In addition, this research project follows a critical realist, processual and dialectical ontology. The intellectual commons and intellectual property-enabled commodity markets are viewed as instituted sets of practices with inherent capacities, tendencies and potentialities (Psillos 2007; Bhaskar 2008, 51). The tendencies of these practices are correspondingly determined by contending forces of commonification and commodification.[38] In other words, the intellectual commons are analysed as manifestations of the clash between commonification and commodification. Furthermore, social structures are conceived not as external but rather as dialectically interrelated to social agency (Bhaskar 2008, 248). On the one hand, these structures are constantly reproduced and transformed in daily life from the bottom up through the iterative practices of active agents in their social context. On the other hand, the structural properties of intellectual commons and commodity markets are perceived to feature mechanisms that frame social activity in a top-down manner, by enabling or restricting practices of commoning and processes of commodification (Sayer 2010, 70–79).

Accordingly, the intellectual commons are investigated as sets of iterative social practices with specific tendencies towards commonification, which are, though in constant flux, penetrating and penetrated by commodity market exchange and in dialectical relation with the dominant power of capital. On these grounds, it is claimed that the causal powers of commonification constitute tendencies, not laws (Danemark et al. 2002, 70). Such tendencies unveil themselves within open social formations. This means that tendencies of commonification can be prevented from or facilitated in manifesting themselves by the conditions set out in each specific social context, in which intellectual commons communities are placed. Hence, the intellectual commons are not searched out in pure form as clear-cut and fixed entities but, rather, as partial or dispersed manifestations of commonification enmeshed within societies primarily reproduced according to the capitalist mode of intellectual production, distribution and consumption. In this sense, the commons-based mode

of intellectual production, distribution and consumption is conceptualised as a proto-mode of social reproduction, i.e. not yet integrated as a mode proper in contemporary societies.

As far as its research paradigm is concerned, this research applies a critical political economic analysis to the alternative mode of social reproduction, based on the commons. Such an intellectual endeavour holds power as central to social relations and structured in the institutions of society, understood as both a resource to achieve goals and an instrument of control within social hierarchies (Mosco 2009, 24). The present research on the critical political economy of the intellectual commons unfolds in two dimensions. On the one hand, it studies the power relations that mutually constitute the production, distribution and consumption of intangible resources. And, on the other hand, it deals with the circulation and pooling of social values within and beyond the spheres of the intellectual commons.

In normative terms, the present research project approaches facts as necessarily theory-dependent, in terms of both semantics and perceptions (Popper 1963; Kuhn 1970). Therefore, such an approach rejects the view of scientific objectivism as ideologically laden, i.e. in reality concealing a specific subjective normative stance concerning the interrelation between social research and its objects of analysis (Habermas 1966). Instead, it openly adopts an alternative subjective approach to science in terms of the categorical imperative of critical theory, the content of which is, in Karl Marx's words, 'to overthrow all conditions in which man is a degraded, enslaved, neglected, contemptible being' (Marx 1997, 257–258). In the context of the intellectual commons, the aim of the research is to highlight their potential for social emancipation and the abolishment of all forms of domination.

5.3. Research Method

5.3.1. Constructing the Research Methodology

In terms of methodology, a twofold iterative method of analysis is employed regarding the dialectical pairs of both theory/research and society/agency. Theory and research are viewed as interpenetrating and, therefore, the research follows a spiralling back-and-forth movement between theory and data to arrive at findings and conclusions. Such an approach ensures that the normative perspective mentioned above is thoroughly observed throughout the research project. Accordingly, the mutual conditioning and interrelation between agency and structure necessitate a combined bottom-up and top-down analysis of forces of commonification and their social context, so as to understand the social causes behind the specific manifestations of the intellectual commons.

In this context, it is claimed that both the capacities and the mechanisms generated within the intellectual commons can be identified and become known through a dialectical combination of empirical observation and abstract theorisation (Lawson 1998, 156; Danemark et al. 2002, 22). Such a dialectical movement from the empirical to the real follows a specific sequence of scientific understanding. According to this sequence, the processing of empirical data first reveals the existence of social phenomena within the intellectual commons, which are then resolved into their components and redescribed through abduction, so that any contingent regularities are revealed. Next, any plausible understandings on the causal powers behind these regularities are hypothesised by means of retroduction. Furthermore, the reality of the inferred causal mechanisms is subsequently subjected to empirical scrutiny. In addition, the empirical adequacy of the hypotheses under examination is checked in comparison to that of competing explanations. Finally, the relevant social mechanism is unearthed and analysed (Archer et al. 1998, xvi; Bhaskar 2008, 135; Bhaskar 2014, vii–viii). In this context, abduction is the cognitive exercise of redescribing social phenomena in an abstracted way, so as to give account to the existence of demi-regularities and potential causal powers behind them (O'Mahoney and Vincent 2014, 17). Accordingly, retroduction refers to the cognitive exercise of constructing 'a theory of a mechanism that, if it were to work in the postulated way, could account for the phenomenon in question' (Bhaskar and Lawson 1998, 5).

5.3.2. Building a Research Strategy

Value in the commons and the practices of value circulation and pooling are socially determined phenomena related to dominant and alternative perceptions regarding the attribution or not of importance to productive activity, which are therefore not equated to the intransitive natural characteristics of correlated resources (Marx 1990, 138–140). Furthermore, value circulation in the intellectual commons is strongly determined by the ways in which commoners and the society in general interpret productive practices taking place within intellectual commons communities. Finally, commons-based forms of value are relatively incommensurable, at least compared to the exchange value of intangible commodities in monetised intellectual property-enabled markets. For all these reasons, a primarily qualitative strategy has been opted for the empirical examination of value circulation in the intellectual commons.

5.3.3. Designing the Research

The research is designed in a comparative style of analysis. Along these lines, the deviations in the circulation of commons-based value are comparatively analysed

on the basis of two meaningful distinctions between intellectual commons communities (see Table 5.1 below).

	Types	Spheres
Value circulation	Offline	Contested
	Online	Co-opted

Table 5.1: Commons-based value circulation in comparison.
Source: Author

Depending on the medium of circulation, intellectual commons communities are examined as circulating their produced values either mainly offline or chiefly online. As most communities both have a presence on the internet and their production also involves tangible resources, this distinction is not taken in absolute terms but rather on the basis of whether the internet constitutes the primary medium of value circulation.

Depending on the dialectical relation with intellectual property-enabled commodity markets, intellectual commons communities are examined as circulating their produced values either in a contentious or in a co-opted mode of interrelation with the commodity-form of value circulation. The contentious or co-opted nature of such an interrelation is evaluated depending on the extent that commons-based values are transformed into exchange value and put into circulation in the sphere of commodity markets. Since the dialectical relation mentioned above is in constant flux and subject to their subordination to commodity markets and the state, this distinction between intellectual commons communities is also fragile and should be viewed as changing over time.

5.3.4. Research Sampling

In the relevant research sampling, the Greek society is chosen as the wider field of analysis. There are two reasons for such a choice in the design of the project. For the past eight years, Greece has been facing a severe economic and social crisis, which has destabilised incumbent state and market institutions. As a result, the Greek society is undergoing a period of rapid change and reorientation, in which existing social structures enter a stage of reform and readjustment to the new environment and new structures emerge. In addition, the economic crisis has brought about a corresponding crisis of social reproduction, during which large social groups have been forced to find new ways of meeting their collective needs and desires through sharing, mutual aid and collaboration. This social tendency has resulted in the emergence of various commons in the fields of sustenance, housing, health, education, art, technology, mass media, communications and social innovation. In this light, the Greek crisis is not only a story of pain, poverty and misery. It can also be reconstructed into a

	Contested	**Co-opted**
Offline	Embros Theatre Athens Hackerspace	Athens Impact Hub CommonsLab
Online	Libre Space Foundation Self-managed ERT	Sarantaporo.gr P2P Lab

Table 5.2: Intellectual commons communities in times of crisis: The case of Greece.
Source: Author

narrative of courage, hope, social struggle and progressive change: a narrative of the commons.

On the basis of the factors of distinction designed above, eight communities of the intellectual commons that are active in the crisis-stricken Greek society are selected as objects of empirical analysis and comparison.

The Case of Greece

The 'Embros' Free Self-Managed Theatre is an artistic urban commons at the heart of Athens, Greece. It is housed in an ex-theatre abandoned by the Ministry of Culture that has been occupied since 2011 by artistic and political collectives. In its six years of operation, the artistic community of the Embros Theatre has managed to organise hundreds of minor and major cultural events, from theatrical plays and cultural festivals to political events and social mobilisations.[39] The social space is self-managed by the assembly of the members of the community, which meets every Sunday. Participation in this assembly is open to artistic collectives and whoever is interested in contributing to the community. Proposals to host events are freely submitted and accepted by the assembly after evaluation. The Embros Theatre community is explicitly against the commodification of art and culture. Entrance to the events of the social space has never had any entrance fee. Voluntary contributions of any type, however, have always been welcome. The social impact of the Embros Theatre in the urban culture of Athens is significant and its events and festivals are as a rule heavily attended. The theatre is accommodated in a de facto occupation of a building that is planned to be sold by the state as part of the privatisation programme imposed on Greece by external debtors. Furthermore, the occupied theatre is located in a neighbourhood near the city centre, which is undergoing processes of gentrification under pressure from strong private real estate interests. Therefore, this intellectual commons community is in constant confrontation with law enforcement authorities, with a number of acts of sabotage, evacuation and activists' persecutions on the part of the state. Its contention with art commodity markets and the state classifies this important intellectual commons community at the contested offline pole of the research sample.

The Athens Hackerspace.gr is a community of producers inspired by the practices of the free software movement, which has established a collectively managed and shared makerspace since May 2011 in the city of Athens.[40] According to the constituent rules of the makerspace, the various projects hosted within the Hackerspace.gr community enjoy relative autonomy but are still obliged to comply with its values of behavioural excellence, collaborative sharing, consensus-based decision-making and hacker-inspired do-ocracy. The shared makerspace as a whole is managed by an open assembly, meeting periodically to decide and administer its operations. Over the years Hackerspace.gr has become the main meeting-place of the Athens hacking community and has spawned a number of projects in the fields of open hardware, free software and, in general, open science and technology. The community is intentionally non-commercial, self-funded and self-sustained by the contributions of its members. These characteristics clearly place Hackerspace.gr as an intellectual commons community at the contested offline category of the research sample.

The Libre Space Foundation is a trailblazing community that designs, develops and delivers space-related projects the libre (open source) way. Its common pool resource features, among others, UPSat and SatNOGS. UPSat is the first open source hardware and software satellite, which has been already released in orbit since 18 May 2017. SatNOGS is an open source hardware and software satellite ground station and a network that enables the remote management of multiple ground station operations. Both of these projects have been built from readily available and affordable tools and resources. As stated on the website of the community,[41] the Libre Space Foundation has the vision of an open and accessible outer space for all, by offering the relevant infrastructure to commoners around the world to build satellite and ground station infrastructure and networks. The whole project spawned from the Athens Hackerspace and still holds its productive activities there, the latter being in itself another vibrant intellectual commons community of Greece. Until now the project has been financed by a grant from winning the first prize in the 2014 Hackaday competition and by collaborating with the University of Patras in a relevant EU-funded programme. The community consists of almost twenty core team commoners but has been gradually building an emerging community of contributors around the world through the online dissemination, reuse and improvement of its openly accessible work. Its founding values of openness, sharing and collaboration make this intellectual commons community an innovative for-benefit open source project and, as such, appropriate as a contested online sample community for the present research.

The self-managed ERT is a historically unique example of an ex-state broadcaster transformed into a media commons. It was born on 11 June 2013 amid the social turmoil ignited by the decision of the right-wing-leaning coalition government of the years 2012–15 to switch off the signal of ERT, the Greek national radio and television broadcaster, overnight. The day after the disconnection, the headquarters of ERT in Athens was occupied by citizens and

employees during a massive social mobilisation of 100,000 people. Through this social process the website ertopen.com was established within a few days, the production of the radio and television programme started again as a media commons and its transmission through the internet began reaching millions of viewers. From January 2014 the self-managed ERT was able to retransmit and broadcast one television and 17 radio channels over the airwaves across the country, by occupying the necessary infrastructure and by mobilising a mixed workforce of ex-employees and citizens on a daily basis. Up to June 2015, when the newly elected left-leaning coalition government led by SYRIZA re-established the national broadcaster as a state form of media, the self-managed ERT had already produced hundreds of thousands of hours of television and radio programme as a media commons. Even though almost all its former employees joined the state broadcaster, ERTOpen still produces and transmits its radio programme both online and over the radio spectrum.[42] Its history and its political and social significance thus make the self-managed ERT an ideal media commons for the online contested category of the research sample. The two focus group interviews of self-managed ERT interviewees were conducted in 2017. These interviews cover the history and evolution of the community both before and after the re-establishment of ERT as a state-run public medium.

The Athens Impact Hub is a business incubator for social enterprises and entrepreneurships oriented towards creating a positive social impact. In its statement of purpose, the hub presents itself as promoting an economy of co-creation under the motto '[i]mpact cannot happen in isolation'.[43] Having been incorporated as a non-profit company under the laws of Greece, the hub is part of a wider association of similar hubs across 81 cities around the world. It offers resources for work and knowledge sharing among its members. It is structured as a community of sharing and collaboration, featuring community-oriented events from common lunches and business clinics to skill-sharing sessions, and it employs hub hosts who have the task of facilitating connectivity and interaction among participants in the community. The Athens Impact Hub partners and collaborates with both non-profit and for-profit entities to ensure sources of income. In its four years of operation, the hub has been capable of becoming the undisputable meeting point of the city for civil society and other non-profit initiatives, social economy entrepreneurs and private sector companies with a commitment to corporate responsibility. Even though it operates as an intellectual commons community at the level of incubating projects, the hub spawns and accommodates for-profit start-ups, attracts sponsorships from for-profit market players and, thus, leaves open its productive output to private appropriation and commodification. As a corollary, the Athens Impact Hub has introduced a fresh model of operation into the Greek incubators' industry, which hybridises the intellectual commons with the commodity market in novel ways. As such, it provides an ideal testbed for empirical analysis as the offline co-opted sample of the present research project.

CommonsLab is a social cooperative running a makerspace at the city of Herakleion, Crete. Its members were the core organisers of CommonsFest, an innovative festival for commons communities, which greatly contributed to the launch of informed public discourse about the commons in Greece.[44] The makerspace is equipped with ordinary construction tools, 3D printers, FabLab infrastructure and free software programmes. The makerspace and its infrastructure are open to the public subject to a fee. The CommonsLab team also offers knowledge sharing courses under remuneration for a diversity of activities spanning from free software programming and 3D printing to biological farming and permaculture. Furthermore, CommonsLab has developed certain commons-oriented products, such as DonationBox, a network of interconnected end-devices that have the capacity to remotely run donation campaigns and are purported to be installed in cooperatives and social centres across the country. CommonsLab operates in many ways as an intellectual commons community, yielding valuable knowledge to local societies and actively produces commons-oriented projects. Nevertheless, its dependence on the commodity market forecloses its clients from decision-making and necessitates a fee-based access to its services. As such, CommonsLab has been classified as a co-opted offline community for the needs of the current research project.

The Sarantaporo.gr project is a community that has been building wireless mesh electronic communication networks as a commons since 2010 in a series of remotely located villages inhabiting the slopes of Mount Olympus. The community network of the project consists of 21 backbone nodes, 27 point-to-point links and more than 180 OpenMesh devices, interconnecting approximately fifteen villages, including agricultural farms, schools and public medical centres. In addition, since March 2014 the network has been interconnected through the public internet with the Athens Wireless Metropolitan Network and a dozen other community networks throughout Europe. The community network has been collectively built and is today sustained through the joint efforts, on the one hand, of a core team of ten commoners and, on the other hand, of fourteen local support groups of villagers, who have been offering work hours, financial contributions and the space and electricity from their houses necessary to host and operate the network infrastructure. Furthermore, the community has organised twelve info-points and several major events in the area, including an international battlemesh summit and a social economy conference. The community network is sustained as a common pool resource by the contributions of the core commoners, who hold the necessary know-how and provide the support services needed, and with the help and contribution of villagers. Apart from the network itself, the community offers high-speed wireless internet access services via the network infrastructure on an unrestricted basis and without remuneration. Internet access is provided in both private and public spaces, reaching a consumer base of up to 5,000 end users. The dissemination of internet access on a free basis has been rendered possible though an

agreement between the community and the University of Thessaly for the pro-vision of the latter's excess bandwidth to the community network for the execu-tion of joint research projects. In addition, the core infrastructure of the project was financed through the participation of the community in a European Union research project on community Wi-Fi networks. The sustenance of the project is endangered because of its incompatibilities with the legal framework, which is solely structured for the regulation of the electronic communications com-modity market and, as such, disregards communications as a commons. Fur-thermore, the projects face difficulties of sustenance, since a number of user groups and communities in the villages that participate in the network have equated the access to the commons for free and gratis, thus becoming reluctant to share the workload and the economic burden for sustaining the network. As a result, the Sarantaporo.gr project is heavily pressurised by the dominant value system and legal framework, thus lingering between contestation and co-optation. For these reasons, this project was chosen for the online co-opted category of the current research.

P2P Lab is an independent research hub focusing on peer-to-peer practices and the commons, which has its offices at Ioannina city in the north-western part of Greece. The hub is affiliated with the University of Tallinn and the P2P Foundation. It consists of a core team of six researchers, a council of mentors, a number of external collaborators and a network of activists interested in its theoretical work. P2P Lab's projects involve cutting-edge social research related to issues as diverse as free software, open design and manufacturing, block-chain technologies, open cooperativism, smart cities, P2P energy production, P2P value and, in general, commons-oriented policies. Since its activation in December 2012, the lab has produced a vast intellectual wealth of research projects, journal articles, conference papers, book chapters and book-length endeavours. The intellectual production of P2P Lab is freely available in its entirety to the public under a creative commons attribution non-commercial licence though its website.[45] The research hub is fully dependent on state and intergovernmental research programmes either directly or indirectly through other organisations in order to finance the work of its researchers. This depend-ence makes P2P Lab vulnerable to external pressures on the orientation of its work and puts it in a precarious position as to its long-term sustenance. There-fore, P2P is examined as an intellectual commons community listed at the online co-opted category of the research sample.

All eight of the foregoing intellectual commons communities have been selected as objects of empirical analysis for the qualitative research of the cur-rent project on the grounds of the importance of social values they produce and the social impact they have within and beyond the crisis-ridden Greek soci-ety. Furthermore, the different socio-political visions, value practices, objects of production, means of value circulation and governing institutions of these communities have rendered them ideal for comparative analysis and the induc-tion of valuable findings.

5.3.5. Carving Out the Method of Data Collection

Data collection regarding the circulation of commons-based value in intellectual commons communities has been conducted according to mixed-methods research, featuring a mutually illuminating combination of qualitative and quantitative methods. During the stage of data collection, the qualitative temporally preceded the quantitative method. Next, quantitative and qualitative data were analysed in parallel. Finally, the two strands of data were merged at the interpretation stage. In this convergent parallel design, the qualitative data were given priority over the quantitative method, with the qualitative being the principal data-gathering tool and the quantitative acting as data coding tool (Creswell and Plano Clark 2011, 66–67).

As a starting point, a series of ten interviews were executed in the form of focus group interviews with members of the communities that constituted the object of the social research. The focus group method of interviewing was chosen for several substantive reasons. First, each focus group consisted of individuals sharing the experience of being involved in the same intellectual commons community (Merton, Lowenthal and Kendal 1956, 3). Secondly, the interviews focused on the ways through which interviewees construed social value in their community (Puchta and Potter 2004, 6; Bryman 2012, 502–503). Thirdly, since values are essentially based on common meanings and mind-frames, interviews aimed to trigger lively discussion, argumentation and, even, disagreement between interviewees on what is valuable or not in their community, thus generating a synergistic group effect between interviewees, which would not be possible to unravel from individual interviews (Stewart and Shamdasani 2015, 45–46). All of these characteristics made focus group interviewing more appropriate as a research method in order to achieve inclusive data collection, collect qualitative information on the subject matter under examination and arrive at valid findings.

Along these lines, the focus group interviews took place in an environment that was familiar to the interviewees, i.e. the social spaces of their communities. An interview guide was applied and flexibly adopted according to the course of each focus group discussion. The guide was deemed necessary to ensure that all research areas were adequately covered. Nevertheless, since their subject matter referred to cultural values and social value, in general, the interviews adhered to a flexible pattern, allowing the participants to take the lead, offer their own interpretations and narratives about matters asked, discuss together and, even, argue with one another (Arthur and Nazroo 2003, 110–112).

The structure of the interview guide comprised proposed main questions, as well as probing and follow-up questions, wherever needed, as a means to enrich collected data from interviewees. Main questions were structured as elaborate questions, which were, then, unpacked by probing and follow-up questions, the latter often including ranges of candidate answers to help participants in the conduct of their response (Puchta and Potter 2004, 64). Focusing on

what is directly observable, questions sought to unravel concrete experiences, observations and feelings, instead of just the impressions and opinions, of the interviewees. In certain cases, alternatives between potential questions were devised to take into account the diversity of interviewees' responses. The questions were formulated in a way so as to elicit the interviewees' subjective descriptions about their communal life-words and reveal any possible intersubjective meanings and shared pre-reflections and pre-theorisations (Brinkman 2014, 286–289).

After the conclusion of the interviews, the members of the focus groups were given a self-completion questionnaire with structured multiple choices. In the general context of the current project, the self-completion questionnaire was utilised as an appropriate tool for the application of the iterative research method in action. With this intention, the interviewees were first called upon to digest the discussion which had taken place during the focus group interviews and, after self-reflecting, asked to complete the questionnaire according to their informed assumptions. In this sequence of qualitative and quantitative research, the purpose of the questionnaire was to act as a data coding tool with the participation of the researched subjects themselves.

To cover the needs of data analysis, the main parts of the audio-taped interviews encompassing the core arguments of the interviewees were transcribed and qualitatively coded in the form of a coding guide for each of the eight communities of the research sample. Next, with the help of the guide, the qualitatively coded data were scrutinised and compared with the quantitative data collected through the self-completion questionnaire. Finally, points of convergence and discrepancy between the two streams of data were identified and interpreted.

Having the coded data from the two data collection methods and the points of discrepancy in mind, the stage of data analysis was drawn to a close. Henceforth, with the step-by-step process analysed above, a solid empirical basis was established for the comparison of the eight communities under examination. In the next chapters of the book, the available data are interpreted in order to arrive at safe theoretical findings and conclusions regarding aspects of the circulation of commons-based value in the communities of the research sample.

5.4. Data Coding

As already mentioned in the previous methodological sections, the current research on commons-based value combined both qualitative and quantitative elements. Its qualitative element consisted of ten focus group interviews, each varying in participation between five and seven interviewees. The coding of the qualitative element was executed through the development of themes and their corresponding codes from raw data. This thematic coding evolved as a step-by-step process, spiralling towards higher levels of complexity through

a back-and-forth movement between data-driven induction and theory-driven deduction. First, implicit and explicit ideas were identified and described from patterns of repetition in collected data (Guest, MacQueen and Namey 2012, 10–11). Next, codes were generated by collapsing of data into labels. Following that, generated codes were grouped and combined into overarching themes. In this process, initial themes were reviewed and confirmed or amended, wherever appropriate (Braun and Clarke 2006, 86–93). Afterwards, themes were structured according to relevant research questions in order to present a coherent narrative of the sequences of value circulation and value pooling. Produced themes and codes were then used to write down a general coding guide. Finally, the coding guide was applied to the eight communities of the sample, generating a coding report for each of them. In conclusion, the coding guide is the outcome of an iterative process, combining processes of both coding up from transcribed empirical data and coding down from the theoretical variables, questions and hypotheses of the research (Miles and Huberman 1994, 58–65).

In order to formulate an all-inclusive coding of available data, i.e. both qualitative and quantitative, the coding guide was designed with a threefold structure. In particular, the coding process took place in three separate parts. The first coding part featured the codification of qualitative data from focus group interviews. The second coding part featured the codification of quantitative data from the self-completion questionnaire. The third part codified the comparison between the other two columns and located discrepancies. Overall, though, the outcomes of both the qualitative and quantitative codification were found to generally correspond and complement each other, hence consolidating the findings and conclusions of the research.

5.5. Conclusion

The current methodological chapter has set out the framework of the research project on the social value of the intellectual commons. In terms of theory, it has described the critical realist and political economic approach followed throughout the research. In terms of method, it has determined the aim and demonstrates the strategy, design and sampling of the research project. The last section described the thematic method of coding the collected data. Overall, this chapter has laid down in systematic form the methodological foundations of the research and developed an appropriate framework to elicit the research findings and conclusions exhibited in the following chapters.