

Interventionist research on a controversial megaproject: a research critique on making sense of impacts using engaged scholarship

Abstract

This commentary presents reflections and insights about the role and the legitimacy of academics applying interventionist research to deal with wicked and complex societal problems. It discusses the ethical and moral dilemmas about the role and position of researchers when they are asked to observe, analyse and study complex conflictual social phenomena in which they are immersed. Starting from a research project in Italy on socio-economic impact evaluation of megaprojects, this commentary wants to bring to the academic community several open questions arising from issues that all of us scholars have to face. First, the applied case, i.e. the Turin-Lyon high-speed railway (one of the most contested megaproject in Europe), and the challenge associated with the research project – developing a socio-economic impact protocol for the Turin-Lyon megaproject - are described. Second, the implications for researchers, and their legitimacy, are discussed by focusing on the personal experiences of researchers that raised several ethical and moral dilemmas. Third, the three pillars of the strategy adopted for this research intervention are detailed: interparadigmatic research, a critically performative aim, and a commitment to emancipation through a politics of small wins. Finally, in the conclusion of the commentary several questions about the boundaries of research, the risk of selfishness, or the quest for objectivity, are reported to open up the debate on the interventionist role of research, its risk and legitimacy, within wicked and conflicting social phenomena.

Prologue

This commentary originates from a critical reflection on our involvement, as a multidisciplinary research group, in one of the most contested megaprojects in Europe - the construction of the Turin-Lyon high-speed railway. Researching megaprojects is a challenging task due to the complicated and divisive nature of megaprojects which often bring about cases of ideological, almost existential conflicts, and opposition from the citizenry (Esposito, Terlizzi, and Crutzen 2020; Esposito et al. 2022). Megaprojects have grown considerably in number in the last thirty years (Ma et al. 2019), becoming recently ‘a thing’ for researchers in the field of project management and, more recently, sustainability studies.

So why engage with a megaprojects’ management and in a consideration of accountabilities related to the associated and generated impacts of a megaproject? The fact that megaprojects refer to both permanent installations or temporary endeavours that can dramatically change the outlook of entire territories for a long period of time is, from our point of view, already enough to justify a critical investigation. Moreover, as some megaprojects have a long construction period, they inevitably impact the intergenerational equity between those who pay the costs of construction and those who will enjoy the project’s benefits. We are talking about complex technologies (non-fixed) (van Fenema, Rietjens, and van Baalen 2016), and also smart cities, mega-events, and other services (Flyvbjerg 2017; Li et al. 2018) which feature infrastructural and non-infrastructural parts. Flyvbjerg (2014) states that megaprojects are characterised, at their core, by technology, politics, economy, and aesthetic. They have considerable complexity and dynamism in terms of roles, boundaries, and coordination (Wang et al. 2017). Therefore, scholars emphasise not only their colossal and captivating nature, but also their complexity, their costs (normally around 0.01% - 0.02% of a country’s GDP, according to Yi et al. (2015)), their ability to create physical and social displacement (Gellert and Lynch 2003), and the degree of uncertainty and risks they carry, especially due to the tensions arising from power imbalances (Clegg et al. 2017; Fischhendler et al. 2015; Sovacool 2014).

With the intent of dealing with the concept of sustainable infrastructure from the initial planning phase, all the way to the operational phase (or the ‘legacy’ phase, in the case of temporary projects), those in charge of megaprojects must take a holistic approach to sustainability. A holistic approach takes into account socioeconomic and environmental issues and considers the wide networks and different levels of stakeholders involved. The project management literature has, in recent years, considered these matters. This literature highlights that the social responsibility associated with megaprojects cannot be fully expressed by a “traditional” organisational social responsibility perspective and requires a specific taxonomy. The recent concept of Megaproject Social Responsibility (MSR) (Zeng et al. 2015, Ma et al. 2017, 2019) constitutes a moral and practical reference for us. It also serves as an important reminder of the complexity of conducting research studies on the socio-economic impacts of megaprojects.

The purpose of this commentary is to reflect on our role as academics committed to transformative research, who face the ethical and moral dilemmas that close engagement with controversial projects can create. Our dilemma comes from the need to affirm and not lose legitimacy as researchers, while operating in a transparent and transformative framework with the company and the government that promote the megaproject. In other words, how do we deal with contrasting ideas, perceptions, ideologies and stakeholders’ interests in complex problems (for instance, in megaproject management), where researchers cannot remain bias-free in their intervention? With this in mind, we present readers with the development of our lived experience as researchers involved in the Turin-Lyon megaproject which has exposed us to multiple perspectives. On one hand, we conducted research with the management of the company responsible for bringing the project to fruition, a project which is seeing the light after a long stalemate. On the other hand, we also engaged with other (mostly external) stakeholders, often deeply embedded in the territory and frequently in opposition to the megaproject itself. This dual, often in contrast, perspective directly emerged from our research aim, i.e. developing an inclusive (in terms of stakeholders’ interests) and holistic (in terms of considered aspects) protocol for socio-economic impacts evaluation of the Turin-Lyon railway within the framework of the Megaproject Social Responsibility (Zeng et al. 2015). With this commentary, we make no prescriptive claims and do not provide any answers, instead, we raise a series of issues and questions for those who, like us, find themselves reflecting on their position not only as academics, but ultimately as responsible human beings.

The wicked problem of the Turin-Lyon high speed railway

Our research group is involved in a big and complicated megaproject, the Turin-Lyon (or Lyon-Turin) railway line. The Turin-Lyon railway will be 270 km long and will include a 65 km cross-border section. It will also feature the longest tunnel in the world, 57.5 km (12.5 in Italy and 45 in France). According to the latest update, the project is expected to be completed in 2032, two years after the official deadline with the delay mostly due to COVID-19. Despite being approved and co-funded by the Italian and French governments, and largely financially backed and promoted by the European Commission as it is to become a key part of the Mediterranean corridor of the Trans-European Transport Network (TEN-T), the Turin-Lyon megaproject happens in direct contrast with the will of many local administrators and citizens. This has been the case, in Italy, since the very first talks around the potential construction of the new line, at the beginning of the 1990s. Most notably in the Susa Valley, home of the Italian side of the megaproject, several members of the local communities (including some mayors and local administrators) perceive that the project has been imposed on them, rather than being the result of a constructive dialogue with the Italian government. The exclusion from the consultation and planning phases has led these parties to perceive a real sense of impotency and marginality as stakeholders (Marincioni and Appiotti, 2009). Feeling deeply neglected, and with environmental, economic, and socio-political concerns in mind, the No TAV (acronym for High-Speed Rail in Italian) movement has constantly fuelled the opposition to this megaproject in Italy. The movement, in its heterogeneous composition, has been operating on different levels: technical, intellectual, and social, with both peaceful and violent expressions of dissent in the relentless attempt to stop the

megaproject. All of this while, in 2020, the European Commission reiterated how essential high-speed railway is in cutting down the total emissions in Europe due to transportation and reaching the goal of being the first climate-neutral continent (European Commission 2020).

In the last two decades, some of the protests have made national and international headlines. For example, a march in the town of Venaus in December 2005 involved 30,000 people who occupied and ‘reconquered’ the construction sites. In Chiomonte, in 2011, there was the establishment of the ‘Free Republic of the Maddalena’ in the space chosen as a new building yard. This led to the area being permanently militarised and put under surveillance. In between, the Italian Government established the Technical Observatory in 2006, as a *mea culpa* for past communication and stakeholder exclusion mistakes. This led to a polarisation of perspectives and the emergence of conflict. However, as Ariemma and Burnside-Lawry (2016) point out, some saw the Observatory quickly becoming an instrument of project governance, rather than a multi-stakeholder forum. This did not go down well with the fiery and proud No TAV Movement, as the Chiomonte riots demonstrated.

In more recent years, moments of violence had diminished in intensity and magnitude, only to restart with renewed animosity as soon as new works were announced in 2021. Between the less frequent recourse to institutional power expressed through armed repression of dissent on the one hand (Esposito, Terlizzi, and Crutzen, 2022), and through (faint) institutional mediation of the Observatory on the other (Burnside-Lawry and Ariemma, 2015), it seems that the conflict has been, in one way or another, constantly nurtured by new ideological currents. In 2021, the set-up of a new construction site, after years of standstill, resulted in an upsurge of conflict between opponents, armed forces, anarchist, and populist movements (Apostolopoulou and Cortes-Vazquez 2018). From a sustainability and environmental justice motivation (as mapped a decade ago by Environmental Justice Atlas (Temper, Del Bene, and Martinez-Alier 2015)), new fears of social concerns have been mobilised like the fear of an instrumentalisation of the project for rapidly transferring nuclear arms for the next World War - as multiple senior residents in the Valley mentioned to us during one of our field visits.

However, the use of armed violence on the side of the opponents and defenders has progressively diminished the trust of residents in all institutions. It has also impacted the potential for dialogue that the Observatory wanted to establish as a tool to foster two-way dialogue and accountability grounded on pluralistic democracies and agonism (Bebbington et al, 2007). After all these years, the conversation is still at a stalemate. To illustrate, we note next, via a short ethnographic piece, the sense of uneasiness that we, as researchers but mostly as human beings, experienced while attending a protest in San Didero in April 2021, at the opening of the new construction site.

Following a public meeting of local mayors with citizens (that apparently the public promoter of the megaproject was unaware of), a couple of No Tav leaders gathered the attendees in a small square and, standing in a rather raised position, progressively started haranguing the crowd. The two, well into their 60s and wearing hoodies and beret hats, plunged into a passionate resistance speech: ‘We’ll never back down... this is our fight, and we’ll keep resisting for as long as it takes, we’ve done it for 30 years and we got results. We all know this railway line is not good, and we won’t surrender to the greed and let them destroy our land!’. The speech soon turned to what strategy should have been taken, in what would inevitably become a new fight with the armed forces present in the area: ‘You know what to do, throw stones against them, but be smart how you do it!’. The audience for this speech was diverse and heterogeneous including youngsters, many of them in their teens or early 20s, elderlies and even lots of local children and kids with parents and grandparents. The sound of those words sounded loud and deep - were they about to go to war? We left the site just in time before it escalated, and the fight lasted for the whole day and night, with several people wounded. This was the ultimate wake-up call for us. We wondered if our good intentions had been undermined, and if our intellectual security grounded in working for the common good had been severely tested. Being in the midst of the struggle between those representing law and order on the one hand, and opponents on the other, made us question the meaningfulness of our work and our position. Seeing how even on the side of the opponents, resistance can consciously become violent, in turn generating social, strong, urgent implications, was a powerful moment of moral reflection for us. We tried to figure out what accountability mechanisms we

could have used, ourselves first, to be “free of bias”, inclusive and *superpartes*. And our reflection led us here, to feel in need of opening a discussion with the scientific community that most represents us, in order not only to feel less alone, but at the same time not to be just a cog in a process of managerial capture in measuring social and economic impacts.

Although the company provides impact assessments on water quality, emissions, consumption of energy, impacts on biodiversity, and also constantly publishes remediation plans on the website of the Italian Minister of environment, as the ethnographic tale above shows, this is still not enough for many of the contesters. The opponents are not inclined to accept anything other than the closure of the project, even though nearly 15 km of tunnels have already been dug on the French side and a geognostic tunnel of 7 km already exists on the Italian side. Given the stance taken by the opponents towards the project, even the adoption of advanced environmental protection and surveillance systems by the company has not led to a change in perspective, showing a strong reluctance to compromise on their principles.

The construction of the Turin-Lyon high-speed railway exacerbates the profound nature of wicked problems. Specifically, wicked problems are those problems of a systemic and complex nature, whose search for a solution generates new knowledge about the problem itself. Therefore, understanding the existing deep-rooted cause-effect connections, which in turn are often profound and context-dependent, is fundamental (Guy Peters, 2017; Rittel and Webber, 1973; Zellner and Campbell, 2015). As such, the relationship between the development of infrastructure in an area to facilitate the sustainable mobility of goods and people clashes with the need to expropriate areas, construct concrete buildings, and devote a significant part of public expenditure to build a megaproject that, in the eyes of opponents, will always be seen as unnecessary. Regardless of the quality of the construction techniques, the claimed environmental and social sustainability of the processes, or the use of compensatory funds, the legacy of megaprojects has often been the subject of contestation which public policy co-design techniques have attempted to resolve (Innes and Booher, 2016). The concept of sustainable infrastructure, with its peculiarities and criticalities, is well represented by this case. The Turin-Lyon case is peculiar in demonstrating how citizens could pay for decades for the consequences of not being involved in the design and construction phases of a megaproject. In addition, the risks related to climate change entrench the perplexities on the real usefulness of construction works for the current generations, even if future generations would benefit from the existence of the service and its operations (Brand et al., 2021).

Interventionist Research with a purpose

The research group has different backgrounds: sustainability accounting, critical management studies, sociology, economics, physics, and circular economy specialists. We are different, but all committed to transformative research, one that strives to remove the stereotype long attached to academics as entities sitting in their ivory tower and looking at the world from afar. Specifically, we started this project as a type of Interventionist Research (Baard and Dumay 2020a; Dumay and Baard 2017; Baard and Dumay 2020b; Dumay 2010), which has the ambitious goal to (at least) provide elements to disentangle such a complex problem.

By definition, our Interventionist Research aims to make a contribution that is both theoretical and practical. We are fully aware that, as Jonsson and Lukka (2006) state, this type of commitment to transformative research is very resource and time-demanding, which unfortunately has become a real luxury in the current academic scenario of ‘publish or perish’ but is part of a necessary learning process with the organisation. But please, do not label us as consultants (Suomala, Lyly-Yrjänäinen, and Lukka 2014; Lukka and Suomala 2014). By acting as consultants for the company, we would likely put ourselves in a position of conforming to those technocratic models of management, which our moral commitment to knowledge production runs against. Instead, we accept and appreciate the struggle, the moral trilemma (acting pro, acting against, not acting at all), and the fact that for such an interventionist approach to be successful, we need to be fully immersed in the culture we are studying, by taking

an anthropological approach aimed at getting as close as possible to the phenomenon, but using an evidence-based way (Van Maanen 2011).

However, for its practical nature, an interventionist research project has an undoubted transformative goal of offering a contribution to solve real-world problems and stimulating change that must be put at the service of a genuine commitment towards sustainability (Greenwood and Levin 2007). When we say genuine, we intend to be committed to the cause of bringing sustainability to the attention of the managers regarding their social licence to operate (Melé and Armengou 2016). Interventionist Research has a dual task. First, for the researcher to immerse themselves in the problem at hand, and second, to stimulate emancipatory practices, for the society in general, but also for researchers, as our project can be seen as an opportunity to reflect on and develop a moral legitimacy for researchers to engage in controversial projects (Melé and Armengou 2016). To achieve this, Interventionist Research draws upon theory, which is considered an essential step towards a successful intervention, and directly engages with managerial practices. Interventionist Research also presents results in a language that can be accessible to academics and practitioners alike, rather than an elitist exchange between intellectuals behind closed doors in academic meetings (Grey and Sinclair 2006; Perrow 2008). These practices help counteract Interventionist Research's criticism of being disconnected from the issues practitioners face on a day-to-day basis, as well as engaging with research methods that do not produce results of practical relevance, which limits the impact of the research (Baard and Dumay 2020b).

Our Intervention

Our intervention stems from the motivation to undertake a multi-paradigmatic study to assess the social and economic impacts that this megaproject has had, and will have, on the Susa Valley in Italy. We focus especially on the economic, social, and socio-communicative spheres, using an evidence-based approach that heavily relies on a multi-stakeholder orientation (Science Advice for Policy by European Academies 2019). TELT, the public promoter in charge of the project and a member of the United Nations Global Compact Initiative, contacted us to develop a protocol to fill a gap in the national regulation on accountability and reporting of place-based social and economic impacts generated by construction sites. This is also aimed at responding to the impellent request by opponents to have access to studies on the environmental impact assessment of the entire project¹. Although environmental impacts are monitored and strictly regulated in Europe, the same cannot be said for impacts on society and local economies that in Italy are simply demanded to be somehow reported without having any terms of reference. Or, when done, the social impact assessment of a megaproject, is usually shallow (simply collecting newspapers or posts on the project) or without any implications in managerial terms, or even quasi-exclusively done on successful projects. This is not valid for the entire Europe, as many other megaprojects should now be accompanied by constantly organised multi-stakeholder forums in a global view that sees social sustainability as a core pillar for the effectiveness of public policies (Brand et al., 2021).

We, as researchers, believe it is appropriate to use this opportunity to move beyond the mere interventionist approach as an end in itself to develop a more complex reflection (Alvesson and Sköldberg 2009) about the role that researchers can take to ferry the World's economies towards greater sustainable development (Cheney 2008). This is our moral responsibility: to act now and imbue our research mandate with a greater purpose. The accompaniment of a megaproject towards a sustainable transition (i.e., the paradigm of sustainable infrastructure) sees in the mobilisation of accountability a tool for dialogue with all parties involved, taking precautions to avoid marginalising specific categories of stakeholders (like the opponents). Therefore, we, as researchers, feel compelled to act, by accepting to work on a project that allows us to convey the information and messages as fairly

¹ It should be considered that among these technocratic processes of impact assessment, in Italy, the evaluation of socio-economic spheres is included as a variable inside the more specific environmental impact assessment regulation. Even though there are no guidelines or definitions of indicators, threshold or framework officially approved.

as possible to all stakeholders, and to dialogue with the company leading it on those exact issues that make up the majority of stakeholders' demands.

In this sense, our starting point is engaged scholarship (Laine et al. 2020; Shockley-Zalabak et al. 2017), conscious that, from the point of view of designing and evaluating research projects aimed at making sense of impacts, little has been done to professionally train us, as researchers. This is especially evident in the business and management field (Lehtonen et al., 2022). Therefore, with this commentary, we hope to create a conversation that is simultaneously intimate and open to the scientific community. We wish to stimulate a deep reflection on the role of researchers in accompanying the current economic system in the complexity of transforming megaprojects towards sustainability, dealing with controversies, utopias (or dystopias), and moral concerns. We express here our need to situate Interventionist Research to carry out engaged scholarship and to be able to contribute effectively to the development, even moral, of this type of applied research, also within the humanities and social sciences.

Our interventionist approach is conceived, first and foremost, with a medium to long-term perspective. The goal is to work collaboratively with the company to create shared value and instruments to build a framework to assess the socio-economic impacts of megaprojects. Due to the complexity of megaprojects, this process implies several phases to unpack all the issues. This also means that our intervention is evolving and, in our open and transparent relationship with the project promoter, we express our will and negotiate intervention phases that are consistent with the overall aim.

The first and main phase of our intervention concerns mapping the potential social and economic impacts of the Turin-Lyon railway megaproject. This is to be done in the short, medium and long term, at the scale of the construction site, but also at the municipal, valley and regional levels. For this purpose, we created an experimental protocol, divided into 10 macro areas and 32 sub-areas, as depicted in Figure 1, containing a substantial list of socioeconomic and socio-communicative indicators. This approach takes inspiration from and further develops the model presented by Lin et al. (2017). The indicators have been elaborated following: 1) an extensive literature review on academic writings on megaprojects both from a management and sociological perspective, 2) by benchmarking other comparable megaprojects, and, 3) by analysing the sustainability and Global Compact reports of the global construction industries worldwide. We also acknowledged the importance of tailoring some of the indicators to the particular social, cultural and economic environment of the Susa Valley, where the Italian part of the megaproject takes place and also where most of our intervention occurs. The protocol features about 200 indicators, according not only to the macro-areas and sub-areas, but with a further distinction among primary and secondary, contextual (meaning related to the whole valley) and construction site-related, sustainability-related, and cross-disciplinary indicators (in common for the socioeconomic and socio-communicative parts of our work). It focuses on reconstructing the scenario in the valley from 2012, the year that conventionally marks the *ante-operam* phase, until 2020, which coincides with the *intra-operam* one. Before handing over the framework to another body for the data collection related to both the *intra-operam* and *post-operam* phases, we had the chance to dig deeper into some of the issues surrounding this megaproject. Of course, we would love for our protocol to become a global instrument for the monitoring and assessment of the socioeconomic impacts of megaprojects, but our win, in this case, would be for the protocol to be a convincing starting point in a long-term discussion.

[INSERT HERE FIGURE 1]

The development of the protocol led us to engage with a variety of stakeholders in the valley. This further fed our belief that the extreme polarisation of views on the megaproject is, to date, mostly due to a long-standing lack of two-way communication and engagement since the early planning stages with those stakeholders who, while not directly involved in the realisation of the project, can be deeply affected by it. Our research highlights that more should have been done, and still should be done, to give voice and legitimacy to the unheard, the powerless, well beyond the rhetoric of inclusivity. For the sake of clarity, during the planning phase of the Turin-Lyon railway, a dual strategy was pursued simultaneously. If on the one hand, in 2006 the Observatory for the Turin-Lyon railway

line was established (and declared) as an instrument of democratic exchange, on the other hand, several contend that there was no democratic correspondence in the actions carried out, as the violent eviction in 2011 of the Free Republic of La Maddalena testified. The emancipatory goals of Interventionist Research cannot overlook the escalation of this phenomenon of distancing, and we must not forget the responsibility that we bear as academics in the betterment of several aspects of society, something that Alawattage et al. (2021) and Vinnari (2021) express very clearly in their manifesto and commentary.

The result of our work has been translated into a methodological and experimental proposal and sent to the Italian Ministry of the Ecological Transition in compliance with the environmental impact assessment logic. This proposal includes the importance of formulating a panel of indicators open enough to be adaptable to stakeholders' critique (and this is exactly what happened with a number of indicators that we changed following the stakeholders' suggestions), based on evidence and whose methodology is verifiable and replicable to make the tool as transparent as possible. In doing so, we are committed to fostering policies of replicability and the subsequent release of data in an open way. Indeed, the goal of one of the future intervention phases, currently being negotiated, is to create an Open Data dashboard that will allow stakeholders to interactively visualise and analyse the current, as well as the historical, situation of the valley. This will give all stakeholders a clear overview and understanding the potential impacts that the megaproject may, or may not have, on the area. This part of the intervention is key in the creation of a dialogical process of communication and accountability with (especially external) stakeholders. The literature on Megaproject Social Responsibility (MSR) highlights the need for a true, open and continuous exchange among all stakeholders, in all phases of the megaproject.

Another step in our intervention was to conduct interviews with the management of the company to map the project's stakeholders. Having a company-centric perspective and mapping the relationships has been seminal to understand the context within which the company operates. However, it also helped us see a potential imbalance with those (external) parties we dealt with in the creation of the socio-economic impact assessment framework. Organisations must avoid a self-centred perspective and need an ecosystemic approach in order to identify, prioritise, and consequently engage the relevant stakeholders (Roloff, 2008). For this reason, we firstly adopted Social Network Analysis (SNA) as a tool to support the organisation to better frame its role in a complex ecosystem. Indeed, a SNA identifies how an organisation is positioned within a complex network of stakeholders (Cottafava and Corazza, 2020). In general, according to Rowley (2017) an organisation exists within an external network of relationships and the knowledge of the external network can create advantages for some actors. In this sense, a leader should know the network and ecosystem where the organisation needs to operate and how it evolves. An ecosystem of actors and stakeholders can be built and recreated only through a bottom-up process, by engaging the stakeholders themselves during the mapping process. One of the key points in our intervention was therefore mapping all the stakeholder relationships, but also to analyse the quality of those relationships. We believe it is not sufficient to say, for instance, 'all the mayors of the municipalities involved are among our top stakeholders', if it does not apply in reality. The networks of relationships that the Turin-Lyon project has created are particularly complex and have been made even more so by the difficult socio-political situation of the non-acceptance of the megaproject. In this scenario, stakeholder engagement strategies assume even more relevance. As Kokkinidis (2015) suggests, to stimulate constructive conflict that can become institutionalised and minimises exclusion in decision-making processes, there must be space for 'agonistic pluralism.'

Attention must now be placed on the dynamics among TELT's internal stakeholders but, mostly, on the relationships with external stakeholders, emphasising bottom-up discourses and narratives, with local leaders and local communities. At this level of the study, more of the ethical and moral dimensions of the researcher can emerge and it is important to reflexively evaluate our role in the field. Ferdinand et al. (2007) argue that conducting research based on informed consent (as much as possible) helps protect both the researcher and the participants from real or potential harm. During fieldwork, it is not uncommon for a researcher to be confronted with these ethical dilemmas. This is especially the case when the disclosure of his/her position to the culture studied could

compromise the quality of the data collected or, even worse, lead to the exclusion of the researcher from the field/culture. The specific case of the Turin-Lyon railway requires us to evaluate the potential implications of our presence in the field at every meeting or event we attend, and this is complicated as many opponents could easily see us as people at the enemy's beck and call. With this commentary, however, we hope to show how the situation is a bit more nuanced than that. We keep questioning ourselves, asking "if our role can truly be seen as academic (interventionist) researcher? Or do if the people we relate to see us as technocrats there to validate something that, in their minds and hearts has never been like perceived that way, and about which their conscience would not be moved?"

In the next section, we propose a three-pillar strategy we have followed in our study to effectively manage, in our opinion, such uncertainty in Interventionist Research studies.

Reflections on approaching Interventionist Research

This section serves as a reflection to what instruments we have, as researchers, at our disposal to better tackle the megaproject impact assessment and, more generally, to face research that presents moral and ethical issues. As a research group, we construct our interventions on three pillars: interparadigmatic research, a critically performative aim, and a commitment to emancipation through a politics of small wins.

Interparadigmatic research

Our research moves away from the positivist assumption "that scientific knowledge is a cumulative, unmediated, and complete representation of reality" (Van de Ven 2007). We take an interpretive and critical stance that presupposes that we reflexively interpret a socially constructed reality (Berger and Luckmann 1966). As such, our findings are equally shaped by us and by the people that we study. The intervention, and the production of knowledge arising from it, will inevitably be affected by the presence of the researchers in the field, and this is something to appreciate, or even to exploit, when producing an account of the social world and its complexities. That is why the research output we want to produce is designed to be evidence-based.

However, given our internal diversity, we needed a framework to make sense of our epistemological and ontological positions, and to put them in conversation. Our research can be mostly located on the left side of Burrell and Morgan's (1979) four-window diagram representing the sociological paradigms. We are both committed to "obtaining and understanding of the subjectively created social world as it is in terms of an ongoing process" (Burrell and Morgan 1979), as well as "transcend(ing) the limitations of existing social arrangements", and "providing a critique of the status quo" (ibid, p.32).

The emphasis is placed upon radical change, potentiality and emancipation, all arguments that are favourably considered by some social accounting scholars (Dillard 1991; Gallhofer, Haslam, and Yonekura 2015; Dillard and Vinnari 2018; Dillard and Roslender 2011). We prudently position ourselves within the supporters of critical dialogical scholars, due to our interventionist commitment towards a 'better order' and 'micro-emancipation' (Alvesson and Willmott 1992; Parker 1995; Brown and Dillard 2015), which will be explained in more detail later. Van de Ven (2007), believes that social science research is generally interparadigmatic as he is a fervent supporter of research that can integrate different perspectives, going beyond Kuhn's assumptions (1962) of incompatibility and incommensurability among different paradigms.

Accepting that our research is interparadigmatic by nature helps us take advantage of our differences and gives strength to the intervention. In our case, interparadigmatic, intended as interdisciplinary and intercultural, refers both to our research group composition and to the treated topic. On the one hand, within the research group, the different academic backgrounds – i.e. theoretical physics, accounting and accountability, critical management – and personal beliefs and approaches – e.g. quantitative vs qualitative methods, political views or the boundaries

for legitimate actions and *civil disobedience* (recalling Thoreau) – brought us to experience, and, then, deeply accept the social constructionist point of view of reality. On the other side, the complexity of socio-economic impacts and their relationship with local communities and territory supported us to avoid a purely deterministic accounting approach. These led us to recently start the investigation of the complex interrelationships among the impacts through the use of systems dynamics models and causal loops diagrams.

Critical performative aim

It was clear from the start that our task as interventionist researchers was to find ways to give strength and credibility to our intervention. To avoid confusion between of Interventionist Research and consultancy, (Baard and Dumay 2020a), we also root our Interventionist Research in the critical management principle of Critical Performativity, originally elaborated by Spicer et al. (2009; 2016) as a direct intervention by scholars on managerial practices. Critical Performativity was conceived to express all the inner transformative potential of critical research, too often concerned with critique, rather than proactively engaging in transformative actions (Wickert and Schaefer 2015). We follow Spicer's five steps of a critical performative approach:

- An *affirmative stance* to develop a critical intimacy by closely engaging with managerial practices, especially in the relationships with external and opponent stakeholders.
- Apply *ethics of care* for participants, considering their views and challenging them at the same time. With this approach, we seek to minimise the risk of accepting and legitimising the social order by questioning and considering all the possible scenarios and consequences.
- *Pragmatism*, aimed at demystifying organisations as sovereign systems that cannot be challenged, but instead striving to give voice to the myriad of actors and stakeholders that constitute the system. Emphasis here is given to multi-stakeholder communication and dialogue.
- Engaging with *potentialities*, by encouraging a future pluralistic society of being and doing, opening up spaces for hope and possibilities, while still acknowledging the present struggles and conflicts.
- A *normative orientation* for our interventionist actions, to elaborate sets of criteria which are not prescriptive in nature, but carefully weighed considering utopian scenarios, that can be seen as players of the devil's game by the ones whose identity has become matching with this conflict and the resistance to this megaproject.

Emancipation through small wins

As stated earlier, our interventionist approach is aimed at solving real-life problems through a direct engagement with the organisation and its stakeholders and following the five principles of critical performativity. To avoid consultancy-based solutions, we are committed to stimulate actions that allow the organisation to reflect upon its practices and, eventually, its mistakes. However, we stress that, especially in terms of impact evaluation of contested megaprojects, the mere acknowledgment of what is 'wrong', as often debated in critical literature, would not go far in terms of stimulating social change. Organisational change is, in our view, desired as far as it involves a clear strategy of integrating external actors and gives space for a democracy that does not seek to achieve consensus at all costs, but that actually values agonistic pluralism (Dillard and Roslender 2011; Kokkinidis 2015; Dillard and Brown 2012; Brown and Dillard 2013), by creating outlets where dissent is interpreted constructively, new spaces can be opened where actors can express their views, and exclusion in decision-making is reduced or minimised.

In doing so, as Alvesson and Deetz (2020) warn us, we must avoid falling into academic omnipotence to develop law-like grand theories, capable of explaining and predicting social phenomena in a causal fashion, but we must instead learn to appreciate and celebrate the complexity of social relations and processes. Several scholars are claiming that it is best to focus on small stories and follow a politics of small wins, one that runs against grand narratives, even for wicked problems (Reay, Golden-Biddle, and Germann 2006; Termeer and Metze 2019; Termeer and Dewulf 2019; Parker 2002). In line with this, we take a more cautionary stance, and the emancipatory goal of our Interventionist Research, rather than looking for a one-for-all solution, is best seen as incremental, as a series of micro-emancipatory projects limited in time, space and success (Alvesson and Willmott 1992). This way, the emancipatory project becomes an endless struggle to progressively increase the space for critical reflection and to spark change. As such, we are proposing a micro-emancipation process questioning the managerialism and shifting the commitment towards sustainability to subvert its business-as-usual operations.

Epilogue: Implications for universities and researchers

There is an important need for in-depth training, on the interventionist role of research, especially on its risk. The identification of risk can be lacking potentially conflictual situations, and this calls for a moral reflection on the boundaries between the researcher and the research object, when the former is both a moral actor and a force for emancipation and change through his/her research. For example, over the course of these months, we have asked ourselves several times whether and when it was necessary to stop this project, or when the reputational risk of the researcher becomes such a high-risk variable as to undermine good intentions. We wondered since many of us have lived in those valleys and know the places, if and how to make sense of the research, also considering the personal selfishness of a daily trade-off between academic routine and earned salary. Several times we asked ourselves whether it made sense to continue, and the only answer we have found in recent months is to go on as long as we can produce concrete results - in terms of quality research and knowledge production. And we have done this by allowing ourselves time for moral reflections, which is currently a luxury, considering the forced pace of publication that characterises today's academies. In current scholarship, some disciplines like, for instance, business ethics, critical management studies, and sustainability accounting, have a core responsibility to give voice to the underrepresented categories and groups in economic and organisational contexts. These categories and groups run a perennial risk of being passive receivers of any decision or impact, without benefitting from the same consideration other actors, whose voice is institutionally more legitimised, are granted. Finally, as engaged scholars, we want to conclude by opening a debate on the moral issues arising from the involvement of scholars in conflictual projects, and to involve the research community at large in questioning the need to recalibrate the critical stance of interventionist research.

We would like to ask the broad scientific community:

- What (or where) are the boundaries between engaged scholarship and academic activism?
- What are the boundaries between the need (or selfishness?) for the researcher to pursue their personal goals (i.e., career progression, visibility, new research grants) and the (sometimes just potential) force for change that lies within research?
- Is it always fair (or even necessary) to hide behind impartiality and objectivity, especially when the project or phenomenon they are studying is highly contested on different grounds? How can a researcher map, if needed, the presence of biases, especially within interdisciplinary research groups that have a different epistemological and ontological take on objectivity (for example positivism, pragmatism etc.)?
- Currently there is a lot of hype surrounding sustainability research: scholars from different disciplines (and not rarely antagonistic towards each other) rely on the same ontology and concepts to justify their intents, sometimes opposing. Beyond theoretical justification and methodological correctness, is there a need for an international debate between researchers (“strong” sustainability scientists) or will there be a

natural evolution in the acceptance of compromises and moderate attitudes towards sustainability (“weak” sustainability scientists)?

- How is it possible to construct an empowering dialogue with those who hold differing positions, when it comes to co-create and co-develop a common future?
- How can an evidence-based research approach be put at the service of public policies, when public policy is the object of the contestations?
- What can be done to counteract the lack of training that researchers (especially in the business and management field) get in learning how to design and evaluate research projects’ impacts on societies (Lehtonen et al., 2022)?

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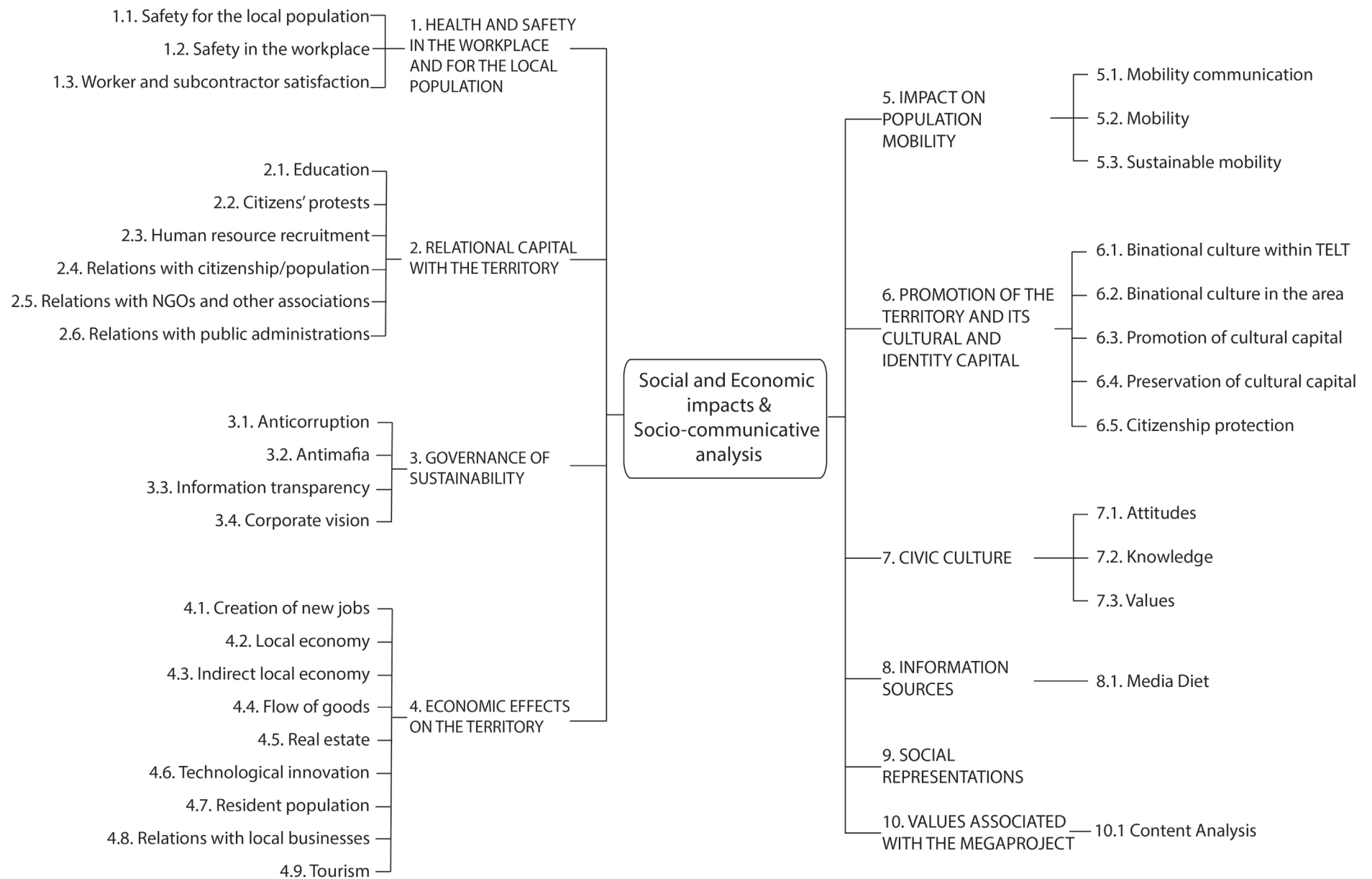


Figure 1: structure of the protocol for socio-economic impacts of the Turin-Lyon railway

