

Collective participation in health in Valle del Huasco, Northern Chile: a critical ethnography of institutional spaces for participation and social movements in a context of environmental conflict

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First and foremost, to God To Carlos, Ana, Gaspar and Antonia To Majd

"I, Esteban Hadjez B., confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis."

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Abstract

Community participation in health is considered by governments and international organisations an essential strategy for tackling health inequalities. However, research in community participation has shown an increasing gap between normative assumptions on participation and empirical findings. Furthermore, there is some evidence of detrimental consequences on local communities related to participation. This led some scholars to propose that more attention be put on social movements, in contrast to relatively isolated formal spaces for participation, to understand better their potential to tackle health inequalities. In Chile, participation has been a transversal strategy within health institutions since the return to democracy. The main mechanism for participation corresponds to local health councils in every primary health care centre. Huasco, a territory in Northern Chile, has been affected by rapid and profound socioeconomic transformations, with negative consequences on the environment and people's health. As such, local health councils coexist with social movements aimed at protecting collective health. This research examines the role of local health councils in a context of environmental conflict, and how these spaces for participation interact with social movements. It also looks at how broader socioeconomic conditions affect participation in health and social movements. For this, I conducted a nine-month critical ethnography in Huasco. The main finding of this study is that local health councils often legitimise existing socioeconomic conditions, specifically the role of provincial industries, due to the economic dependency of local population and public services on these industries. Additionally, emergence of social movements in Huasco relates to the limited scope of formal spaces for participation, and the gradual delegitimation of political authorities. This conflicting interaction between local health councils and social movements corresponds to a historically contingent and open process. The study of social movements in the field of collective participation and public health provides an adequate theoretical framework for addressing these issues.

List of Abbreviations

AES Gener Electricity Generation Company

CAP Minería Iron Mining Company

CESFAM Family health care centre (Centro de Salud Familiar)

CONAMA National Environmental Commission (Comisión Nacional del Medio

Ambiente)

COREMA Regional Environmental Commission (Comisión Regional del Medio

Ambiente)

CORPROA Corporation for Economic Development in Atacama Region

(Corporación para el Desarrollo de la Región de Atacama)

EHM Embodied health movements
ENDESA National Electricity Company

GES Explicit health guarantees (Garantías explícitas en salud)

INDH National Institute of Human Rights (Instituto Nacional de Derechos

Humanos)

INIA Institute for Research in Agriculture (Instituto de Investigaciones

Agropecuarias)

MINSAL Ministry of Health (Ministerio de Salud)

MMA Ministry of Environment (Ministerio de Medio Ambiente)

PM $_{10}$ Breathable particulate matter smaller than 10 μm PM $_{2.5}$ Breathable particulate matter smaller than 2.5 μm

PRAS Programme for Environmental and Social Recovery of Huasco

(Programa para la Recuperación Ambiental y Social)

SAG Chilean Agriculture and Livestock Service (Servicio Agrícola y

Ganadero)

SEIA Environmental Impact Assessment System (Sistema de Evaluación de

Impacto Ambiental)

SINCA Air Quality National Information System (Sistema de Información

Nacional de Calidad del Aire)

SOFOFA Chilean Manufacturer's Association (Sociedad de Fomento Fabril)

WHO World Health Organization

Preface

My initial interest in collective participation in health and social movements in Valle del Huasco began during the first massive protests of the inhabitants of Freirina and Huasco against Agrosuper agroindustrial plant in April 2012. In one of the days of the protest, when communities blocked the road C-46 that connects the localities of Huasco and Freirina to Vallenar, I was travelling from Vallenar to Copiapó, the capital city of Atacama region, to visit my family. While I was in the car, I was listening to the local radio, where information was being given about the recent radicalisation of the protests. The radio went on to describe threats from local communities especially concerning a major blockade of the Pan-American highway (the main road that crosses the country from North to South) if government authorities did not provide an appropriate response regarding the foul odours that affected the entire territory, as could be perceived in Vallenar. I still remember that day: it was a cloudy morning due to the Camanchaca, the dense fog that often covers the Northern Coast of Chile, and the smoke coming from the barricades towards Freirina. In that moment, I was in Chile conducting my fieldwork for my master programme at the Institute of Social Psychology, at the London School of Economics and Political Science. I was specifically researching on community participation in health during the period of the *Unidad Popular* government in Chile from 1970 to 1973.

While I was researching on the historical experiences of community participation in health in Santiago de Chile, I was witnessing how local communities in Valle del Huasco mobilised for the protection of their collective health and their environment. During that time, people from Huasco and Freirina were defending their health in open confrontation with political authorities and industrial interests, who seemed to be committed to repressing the protests. Then, I began to consider that participation in health could not be reduced to the study of institutional participatory programmes, as it is usually addressed within mainstream literature on participation and public health. Nor was it possible to restrict community participation in health to what we, as health workers, usually do with communities. I needed to expand my own understanding of community participation in health to those historical processes of struggle and confrontation between local communities and political elites. Gradually, I developed the idea that community participation must be comprehended as an eminently political and subversive activity. These thoughts were sustained in the writings of Molina (2010), and Samaja (2004), who posed a radical critique to prevailing theories within public health, and in particular to community participation and health promotion in Latin America.

After finishing my master's degree on health, community and development, and initiating my academic career at the Department of Public Health, University of Valparaíso in Chile, I decided to research Valle del Huasco. In January 2014, I travelled for the first time, as a researcher, to Freirina and Huasco. I was still captivated by those communities that were compelled to mobilise against government authorities and industrial representatives, to protect their health, and at that time, to have succeeded in doing so. For this, I designed a preliminary research in the territory, and I obtained an ethical approval from the Ethics Committee of the Faculty of Medicine, University of Valparaíso. Soon, I contacted directors at health centres in Huasco and Freirina, and I was put in contact with a key informant in Vallenar, who accompanied me to meet local leaders and multiple grassroots organisations in Huasco and Freirina. This key informant was of utmost importance for this preliminary research, and its subsequent developments until today, since local communities in Valle del Huasco were very reluctant and mistrustful to receive external social researchers. The reason behind their reluctance is that, as I discovered later through this research, there has been a history of manipulation and abuse from government authorities and local industries through social research projects and psychosocial intervention programmes (social movement focus group, 2014).

During the year 2014, I had monthly visits to Huasco, Freirina, and Vallenar. I could interview and develop rapport and trust with social movements' participants, with people from local health councils, and primary health care workers in the territory. Overall, this preliminary research included fourteen in-depth and semi-structured interviews and two focus groups, all of them audio recorded after ensuring confidentiality and anonymization of personal information of each participant. Similarly, I could participate in multiple communities' activities, such as roadblocks and public protests related to the approval, at that time, of Punta Alcalde thermoelectric project. In addition, I could take part in community meetings organised by Brigada SOS Huasco and Asamblea de Freirina, and popular educational workshops at the Bermor Castillo popular library in Freirina, which no longer exists. I also participated in local traditional celebrations, and some health care centre activities, such as a meeting with one of the local health councils and its coordinator, and another meeting with health workers in one of the territories. This preliminary study allowed me to refine my research questions and theoretical underpinnings, further developed in this PhD programme. Also, this information provided me with useful insights in the way some interviewees' narratives had changed over this period, mostly noticeable among primary health care workers, as I will refer to in Chapter



Figure 1: Participants in the First School of Public Health in Valle del Huasco. Freirina, August – October 2014. Reprinted with permission from its participants.

Additionally, after requests from some members of *Brigada SOS Huasco*, and as part of this preliminary research and the gradual political involvement I acquired in the territory, I coordinated the First School of Public Health in Valle del Huasco for community organisations, in collaboration with members of *Brigada SOS Huasco* and health workers in Freirina. The content and methodology for the school was previously discussed and designed with its participants, which resulted in a programme consisting of eight fortnightly sessions between August and October 2014, that included the topics of: descriptive epidemiology; Chilean health system and primary health care; health promotion; consequences of air pollution on human health; consequences of agroindustrial activity on human health; consequences of environmental pollution on children's neurodevelopment; and a final workshop for health communication. The First School of Public Health in Valle del Huasco brought together around 20 participants, most of them from *Brigada SOS Huasco* and *Asamblea de Freirina*. All sessions were conducted in the district of Freirina, with the support of the local primary health care centre *Practicante* Oscar Ruiz Toro, the Department of Public Health at the University of

Valparaíso, and Fundación CREA, of which I was a member at that time. The objective of the School was to provide local organisations with analytical tools such as epidemiology, to strength the content of their demands and discourses, which were already advanced in terms of technical content, as I will reveal in Chapter 6. For example, as part of the School of Public Health in Valle del Huasco, and using official mortality databases from the Department of Statistics and Information of the Ministry of Health, local communities discovered high mortality rates due to urinary tract cancer in the district of Huasco.

This preliminary research during 2014 allowed me to understand with more detail the processes that resulted in massive mobilisations, but above all, to recognise, using Touraine's concept (1985), those submerged cultural and environmental struggles of decades in the territory. These latent struggles, although they never achieved public visibility as in the case of the massive mobilisations in Freirina, were of utmost importance for later events between April and December 2012. In this regard, it was very useful for me to expand the initial research territory from Freirina to Huasco. It was in this territory where the first grassroots organisations emerged for the first time in Valle del Huasco, after the transition to, and consolidation of democratic capitalism in Chile. It is also this territory that has endured for longer the consequences of environmental pollution. Therefore, it is in this context, and assuming an academic and political commitment to these communities in struggle, that I decided to begin my PhD process at the London School of Hygiene and Tropical Medicine. As such, this research constitutes a step forward into a research programme on collective participation in health in Valle del Huasco which I intend to continue in the next years.

Chapter 1: Introduction

Community participation in health is considered by many international organisations and governments as an essential strategy for tackling health inequalities and for deepening democracy (Beaglehole, Bonita, Adams, & McKee, 2004; Wallerstein & Duran, 2006; World Health Organization, 2010). Specifically, it is a fundamental element within primary health care, the latter corresponding to the main component of national health services, and a policy for attaining socioeconomic development (Bath & Wakeman, 2015; Morgan, 2001; World Health Organization, 2008). In this regard, during the First World Conference on Primary Health Care held in Alma Ata, international organisations and government representatives coincided in signalling community participation as a key strategy for the development of local communities and primary health care services (World Health Organization, 1978). Community participation in health was defined then as "the process by which individuals and families assume responsibility for their own health and welfare and for those of the community, and develop the capacity to contribute to their and the community's development" (World Health Organization, 1978, p. 49). More recently, community participation has been conceptualised as a right of citizens, and as a mechanism for enhancing efficiency and transparency within primary health care (World Health Organization, 2008). Furthermore, it has been suggested that community participation at the local level can promote broader structural transformations, and hence, primary health care would constitute a privileged space for tackling health inequalities (World Health Organization, 2008).

Community participation in health also constitutes a central strategy for health promotion, considering it as "the process of enabling people to increase control over, and to improve, their health" (World Health Organization, 1986). Because of the existence of broader unequal socioeconomic conditions that affect people's wellbeing, health promotion aims to empower individuals and communities to act on these wider social determinants of health (Bhuyan, 2004; Laverack & Labonte, 2000; World Health Organization, 2010). Consistently, in the First World Conference on Health Promotion held in Ottawa, representatives at the meeting declared that health promotion requires "concrete and effective community action in setting priorities, making decisions, planning strategies and implementing them to achieve better health. At the heart of this process is the empowerment of communities, their ownership and control of their own endeavours and destinies" (World Health Organization, 1986). The importance of community participation for health promotion has been further reaffirmed in the 9th Global

Conference on Health Promotion held in Shanghai (World Health Organization, 2017). In this conference, health promotion was reoriented towards the strategy of Healthy Cities and Communities' movement, where local communities, among many other intersectoral actors, are responsible for transforming social determinants of health and tackling health inequalities in a territory (World Health Organization, 2017). It was declared that health promotion requires "acting decisively on all determinants of health, empowering people to increase control over their health" (World Health Organization, 2017, p. 8).

However, and despite the importance of community participation in health for policy-makers and many international organisations, research on the subject evidences an increasing gap between normative assumptions related to participation, and empirical research findings (Campbell, 2014; Cornwall & Coelho, 2007; Menéndez, 2008). Often, research shows inconclusive results of participatory health programmes, and research findings usually do not sustain proposed hypotheses for community participation in health (Campbell & Cornish, 2014; Cornwall & Coelho, 2007; Rifkin, 2014). Despite decades of implementation of participatory health programmes in many regions of the world, there is convincing evidence that health inequalities remain pervasive (Bleich, Jarlenski, Bell, & LaVeist, 2012; Coburn, 2004; Mackenbach, 2012), and in many countries, there is growing delegitimation of democratic institutions (Cornwall & Coelho, 2007; Della Porta, 2015; Žižek, 2012). Considering this scenario, scholars on community participation have addressed this epistemological problem in two different ways, which I present in a simplified and schematic way. On the one hand, a group of researchers have argued that the inconclusive results of participatory programmes relate to both the complex character of these types of interventions, and the methodological difficulties derived from divergences on the concept of participation (Cornish, Priego-Hernández, Campbell, Mburu, & McLean, 2014; Marston, Renedo, McGowan, & Portela, 2013; Rifkin, 2014). As such, these scholars propose to improve evaluation methods on participation, emphasising the importance of integrating qualitative and quantitative research methods, and to promote the development of a common language regarding community participation in health (Merzel & D'Afflitti, 2003; Rifkin, 2014).

On the other hand, other researchers have suggested to critically assess our theoretical and political assumptions regarding community participation in health (Campbell, 2014; Cooke & Kothari, 2001; Williams, 2004a). Within this perspective, three interrelated positions emerge. First, some scholars have proposed to abandon the theory of participation, considering not only its inconclusive evidence, but also the deleterious consequences that often participatory

programmes impose on individuals and local communities, mainly through the legitimation of neoliberal policies (Cooke & Kothari, 2001; Mosse, 2001; Ugalde, 2006). Second, other researchers have criticised mainstream community participation theories due to their eminently depoliticised character, and therefore, argue for a more detailed analysis of both unequal power relations within participatory programmes, and broader socioeconomic context that usually constrains social change (Campbell & Cornish, 2010; Cornwall & Coelho, 2007; Mohan, 2006; Williams, 2004b). Third, and more recently, a group of scholars have proposed to look at broader social movements, considering their potential for tackling health inequalities and deepening democracy, in contrast to more fragmented and short-term basis of most institutional participatory health programmes (Campbell, Cornish, Gibbs, & Scott, 2010; Fassin, 2008).

This research situates itself within the latter epistemological position, and therefore it attempts to contribute to the field of community participation in health, and public health in general, by looking at social movements and collective action in health. In what follows in this introductory chapter, I provide a broader theoretical perspective of community participation in health, and address the problem of the distance between normative assumptions and empirical research findings in the field. Particular, in the first section I refer to current understandings of what is community participation in health, and the hypotheses underlying participatory health programmes. Among the latter, I argue that the concept of social capital is a key element for articulating the theory of participation within mainstream theories, in particular within the discipline of public health. In the second section, I address what is the current status of evidence regarding participation in health in low, middle, and high-income countries. In the third section, I provide a more detailed account of the epistemological problem posited above, and I refer to those scholars that suggest looking at social movements, presenting some theoretical challenges for this position. In the fourth and last section, I present the general research questions that will guide this thesis, and I introduce the structure of this thesis.

Community participation in health

Community participation in health – also referred to as 'community involvement', 'community engagement', or 'community mobilisation' in health – is an "elusive and contentious" concept (Draper, Hewitt, & Rifkin, 2010, p. 1103). It describes a wide range of activities with varying – and often antagonist – degrees of community involvement in the design, implementation,

and evaluation of health programmes (Campbell, 2014; Guareschi & Jovchelovitch, 2004; Montero, 2004; Murray, Nelson, Poland, Maticka-Tyndale, & Ferris, 2004). Despite its multiple meanings, community participation in health per se would constitute a beneficial and desirable social process (Cornwall & Coelho, 2007; Draper et al., 2010). In this regard, it has been promoted by dissimilar ideological and theoretical perspectives to justify their divergent interests within health and health care (Anigstein, 2008; Campbell, 2014; Cornwall & Coelho, 2007). Therefore, a common practice when attempting to define community participation is understanding it as a "reference framework" (Anigstein, 2008, p. 78), and developing many typologies for participation, which are merely schematic and open to discussion (see, for example, Fraser, 2005; Morgan, 2001; Rosato, 2014). For the purposes of clarity and simplicity, I refer here to only one of these typologies. Campbell and Murray (2004) identify two divergent theoretical positions for community mobilisation in health: the 'accommodationist' and 'critical' perspectives.

The accommodationist perspective refers to the analysis and practice of community participation in health focused primarily on the individual and biomedical level (Campbell, 2014; Campbell & Murray, 2004). In this regard, communities are represented as aggregations of rational individuals, consistent with what is referred to as 'methodological individualism' within social sciences, i.e. an epistemological position that reduces the explanation of macrosocial phenomena to individual's decisions as its ultimate constituents (Lukes, 1994; Watkins, 1994). Within this approach, Tritter (2009) and Tritter and McCallum (2006) adopt the term 'patient and public involvement' for defining community participation in health. For these authors, this term is defined as "ways in which patients can draw on their experience and members of the public can apply their priorities to the evaluation, development, organization and delivery of health services" (Tritter, 2009, p. 276). The accommodationist position for community participation in health considers the wider socioeconomic contexts of individuals and communities as relatively immovable and legitimate, and thus it can be described as a conservative social practice (Campbell, 2014; Campbell & Murray, 2004). In this regard, community participation in health is conceptualised as a way for improving existing health practices within the constraints of wider socioeconomic structures (Berroeta, 2014; Campbell & Murray, 2004).

The accommodationist position assumes that individuals can improve their health situation both through informed rational decisions on their lifestyles, and through their support to existing health care services (Schwarzer & Fuchs, 1999; Tritter, 2009). Accordingly, underlying

the accommodationist perspective there are specific hypotheses that explain why community participation improves people's health: community participation promotes individual health-related behaviour change (Kahssay & Oakley, 1999; Toledo et al., 2007; Zakus & Lysack, 1998); enhances health services utilisation (Kahssay & Oakley, 1999; Rifkin, 1996; Tritter, 2009); and improves efficiency and sustainability of health programmes (Lawn et al., 2008; Rifkin, 1996, 2009). Traditional health educational approaches, which commonly correspond to this theoretical position, have reported little impact on both modification of health behaviours and uptake of health services, usually restricted to the more affluent and better educated groups (Campbell, 2001; Campbell & Cornish, 2010).

The critical perspective for community participation is characterised by a broader focus on structural inequalities which determine individual and community health. It explicitly assumes community participation as a political and transformative social practice (Campbell, 2014; Campbell & Murray, 2004; Hepworth, 2006; Montero, 2004). Community participation in health is defined accordingly "as a route to collective action to challenge (or 'resist') the social inequalities that place peoples' well-being at risk" (Campbell, 2014, p. 40). This later theoretical position coincides in many aspects to what has been defined as 'radical approaches' (Fraser, 2005) and 'empowerment models' for community participation in health (Guareschi & Jovchelovitch, 2004). The critical approach to community participation expands the aforementioned set of hypotheses - although the specific socio-psychological pathways in which participation improves health remain partially unexplored (Campbell & Jovchelovitch, 2000; Campbell & Murray, 2004; Pearce & Smith, 2003). In this regard, it is proposed that community participation enhances social cohesion (Campbell & Cornish, 2010; Campbell & Jovchelovitch, 2000), and promotes empowerment among disadvantaged communities for tackling health and social inequalities (Campbell, 2003; Campbell & Murray, 2004; Montero, 2004).

From this critical position, the emphasis on the community level for health promotion strategies diverges from the individual and biomedical approaches to health that characterises the accommodationist position discussed above (Campbell, 2001; Campbell & Murray, 2004). Community level approaches for health promotion include peer delivered interventions, community mobilisation, and more recently, the creation of health-enabling communities (Campbell & Cornish, 2010; Campbell 2001). From their research on HIV/AIDS prevention strategies, Campbell & Cornish (2010) define health-enabling communities as those communities with high levels of social capital, capable to mobilise for broader socioeconomic

change, which are also supported by a social context, including material, symbolic, and relational dimensions, that facilitates community empowerment. These two conditions, it is argued, are necessary for disadvantaged communities to address more structural determinants of health (Campbell & Cornish, 2010; Laverack & Labonte, 2000; Montero, 2004). The strategy of Healthy Cities and Communities' movement is based on this approach (Campbell, 2001). It focuses on increasing social capital among underprivileged communities, and on the development of local and national policies for that purpose (Campbell, 2001; World Health Organization, 2017).

Recently in the field of public health and community participation, the notion of social capital has become a key concept for understanding how socioeconomic inequalities affect communities' health (Baum, 1999; Lynch, Due, Muntaner, & Smith, 2000; Pearce & Smith, 2003; Wakefield & Poland, 2005). In general terms, social capital refers to the existence of reciprocal networks of solidarity and trust both within local communities, and with external stakeholders and institutions (Baum, 1999, Campbell, 2001; World Health organization, 2010). Social capital has been studied as a mediator for analysing, in particular, how income inequalities affects people's health (Baum, 1999; Uphoff, Pickett, Cabieses, Small, & Wright, 2013). In this regard, researchers have observed that, adjusted by income inequality, communities with higher levels of social capital have, on average, a better health situation (Lomas, 1998). Accordingly, some scholars propose that the development of social capital contributes to an overall improvement of people's health, and therefore would constitute a strategy for health promotion (Campbell, 2001; Uphoff et al., 2013; World Health Organization, 2010). Several mechanisms for this are proposed: social capital would increase perceived self-efficacy among individuals and communities (Campbell, 2001); social capital would diminish stress and stress-induced behaviour like tobacco and alcohol consumption (Campbell, 2001; Younsi & Chakroun, 2014); social capital would facilitate the development of trust among local communities and health workers, improving coverage and effectivity of preventive measures (Uphoff et al. 2013; Younsi & Chakroun, 2014); and social capital would reduce general violence within communities (Campbell, 2001; Uphoff et al. 2013).

Despite many advocates of the concept of social capital within health promotion, some authors have posited serious critiques to this strategy. One of these critiques refers to the lack of a clear definition of the concept of social capital (Baum, 1999, Campbell 2001; Lynch et al., 2000). In particular, Lynch et al. (2000) argue that the concept of social capital is eminently descriptive, but does not provide an adequate explanatory framework for examining the relationship

between income inequalities and community health. Furthermore, other scholars suggest that social capital constitutes a novel concept within the field of public health which has been overused by health workers, without understanding its political and ideological implications (Baum, 1999; Lynch et al., 2000; Pearce & Smith, 2003; Wakefield & Poland, 2005). In this regard, the emphasis on developing social capital within disadvantaged communities may deviate efforts addressing more structural determinants of health, potentially justifying the reduction of state responsibilities and welfare provision within neoliberal societies (Baum, 1999; Wakefield & Poland, 2005; World Health Organization, 2010). Another criticism to the concept of social capital comes from the observation that some communities with high levels of social capital can also exhibit xenophobic attitudes and discrimination to others, challenging the idea of social capital as an essentially beneficial attribute of groups (Baum, 1999; Lynch et al., 2000; Pearce & Smith, 2003; Wakefield & Poland, 2005).

The distance between normative assumptions and empirical research findings

The aforementioned theoretical problems in defining what constitutes community participation in health, i.e., the existence of multiple and contradictory perspectives regarding participation (Campbell & Murray, 2004), and the problems derived from the use of social capital for developing strategies for health promotion (Lynch et al., 2000), also encounter methodological challenges. As mentioned earlier, research on community participation in health evidences an increasing gap between normative assumptions related to participation, and empirical research findings (Campbell, 2014; Cornwall & Coelho, 2007; Menéndez, 2008). Often, studies show inconclusive results of participatory health programmes, and research findings usually do not sustain proposed hypotheses for community participation in health (Campbell & Cornish, 2014; Cornwall & Coelho, 2007; Rifkin, 2014). In what follows, I discuss three recent systematic revisions and one meta-analysis that address the implementation of community participatory programmes and their impact on health outcomes. These include a myriad of participatory experiences in low, middle, and high-income countries, addressing diverse health programmes, such as child and maternal health, control of communicable and non-communicable diseases, and health systems' accountability, among others.

The first of these studies corresponds to Marston and colleagues' (2013) systematic revision of community participation and maternal and child health. These authors reviewed investigations

that compared participatory health interventions with no interventions, and their impact on uptake of maternal health care, maternal mortality and morbidity, and neonatal mortality (Marston et al., 2013). For this purpose, authors defined participatory health interventions as any intervention that consisted of at least a collective assessment of health needs, a community dialogue assessing the impact of structural determinants of health, resource mobilisation, or a collective demand for people's right to good quality health care services (Marston et al., 2013). Seven original studies with low to moderate bias were included, all of them in English. These involved participatory experiences in Bangladesh, India, Kenya, Malawi, and Nepal (Marston et al., 2013). Four studies found positive effects on maternal and neonatal health outcomes, one showed marginal effects, with problems in the interpretation of its results, while two showed no impact (Marston et al., 2013). Of those studies reporting positive effects, all included raising collective awareness of maternal and child health through community dialogue (Marston et al., 2013). Some of them also included resource mobilisation strategies, such as generating funds for improving transportation in case of obstetric emergencies (Marston et al., 2013).

Despite suggesting that community participation has an overall positive impact in maternal and child health, Marson and colleagues (2013) argued that the published evidence is inconclusive for pointing out the characteristics of successful participatory interventions. They emphasised the small number of good quality research for the evaluation of community participatory programmes in maternal and child health, most of them corresponding to randomised controlled trials (Marston et al., 2013). In this regard, the authors concluded that there is a necessity to incorporate qualitative research for the evaluation of participatory health programmes alongside quantitative research. Marston and colleagues (2013) argue that qualitative research could improve our understanding of the contexts where health interventions take place and could provide a detailed assessment of community participation in health as a dynamic and contingent process. Additionally, qualitative studies could contribute to the evaluation of social effects beyond traditional biomedical and behavioural outcomes, including for example women's status (Marston et al., 2014). Researchers also criticised the lack of a consistent nomenclature for participatory health interventions among different investigations, posing important problems for their assessment (Marston et al., 2014).

A second revision by Rifkin (2014) focused on studies that included community participation as a main component of different health programmes. Drawing on her earlier work (Rifkin, 2009), she updated published systematic revisions on the role of community health workers; on community participation for the control of communicable diseases such as Chagas and

malaria, and maternal and child health; on community participation in health facilities committees for improving accountability of health care services; and on community participation for health promotion. She included published systematic revisions from 2003 to 2013, all of them in English. Rifkin (2014) utilised a broad inclusion criteria for addressing participation in health, including top-down programmes mainly designed and implemented by health workers, coinciding, to a certain extent, with the 'accommodationist position' described earlier. After conducting her revision, Rifkin (2014) argued that there is inconclusive evidence of a link between community participation in health and improved health outcomes, pointing out that "these experiences based on selected case studies produced assumptions rather than evidence of the value of participation" (p. ii99).

Rifkin (2014) suggested that the lack of consistent evidence on the relationship between community participation and health outcomes can be related to three main methodological problems: a non-standardised definition of community participation, and the lack of a common conceptual framework; the difficulties for isolating participatory health programmes, as discrete interventions, from other health actions; and the highly contextual and dynamic character of community participation in health. Coinciding with Marston and colleagues (2013), the author called for including rigorous qualitative research for the evaluation of participatory health programmes, and criticised the overly reliance on randomised controlled trials for this purpose (Rifkin, 2014). She argued that community participation corresponds to a complex public health intervention, and therefore it requires innovative frameworks for evaluation that overcome the mechanistic and reductionist approach of traditional clinical trials (Rifkin, 2014). In this regard, she proposed to understand community participation as a process to sustain and contribute to the design and implementation of health programmes, rather than an isolated and specific health intervention (Rifkin, 2014).

Cornish and colleagues (2014) also conducted a systematic revision on community participation in the context of HIV/AIDS prevention programmes. In particular, they reviewed original research that examined the potential link between community participation in health, as part of more complex health interventions, and its impact on a number of selected biomedical, behavioural, and social outcomes (Cornish et al., 2014). These covered prevalence of HIV and other sexually transmitted diseases, condom use, HIV test-taking, social cohesion, and partner violence (Cornish et al., 2014). According to the authors, they used a 'minimalist' inclusion criteria for defining participation, as any externally triggered intervention that seek to capitalise "on those community connections and strengths to generate new possibilities for action"

(Cornish et al., 2014, p. 2). In their revision, Cornish and colleagues (2014) included seven randomised controlled trials, and 12 observational studies published between 2003 and 2013, all of them in English. These studies were conducted in low and middle-income countries. From their systematic revision, they conclude that findings were often inconclusive, with the exception of studies focusing on high risk groups, such as sexual workers, and men who have sex with men, where community participation was consistently effective for decreasing sexually transmitted diseases and increasing condom use (Cornish et al., 2014).

Coinciding with previous systematic revisions, Cornish and colleagues (2014) argue that community participation in health is not properly defined, and most interventions included in the revision seemed to correspond to static, tokenistic, and inflexible participatory programmes which characterise the 'accommodationist' perspective discussed above. In addition, the authors suggest that most interventions failed to engage with broader social and political conditions that placed people's health at risk (Cornish et al., 2014). Accordingly, none of the studies included evaluation of social impacts such as policy implementation or changes in legislation (Cornish et al., 2014). They also concur with Marston et al. (2013) and Rifkin (2014) in maintaining that community participation in health, due to its complex character, requires a detailed contextual evaluation that often differs from randomised controlled trials for assessing health interventions, suggesting the inclusion of qualitative methods for its assessment (Cornish et al., 2014). Finally, Cornish and colleagues (2014) conclude that "the evidence is inconclusive not because [community mobilisation interventions] are ineffective, but instead due to problems with operationalization, evaluation and review methodologies" (p. 20).

In a recent meta-analysis examining the links between community engagement and health outcomes, O'Mara-Eves et al. (2015) focused on a number of participatory interventions within OECD countries. These included programmes on substance abuse, cardiovascular diseases, cancer screening, antenatal care and breastfeeding, tobacco consumption, immunisation, and health promotion, among others (O'Mara-Eves, Brunton, Oliver, Kavanagh, Jamal, & Thomas, 2015). For conducting their meta-analysis, authors defined collective engagement as any health intervention that involved communities in decision-making, planning, design, and/or delivery of health services (O'Mara-Eves et al., 2015). O'Mara-Eves and colleagues (2015) included 131 studies published after 1990, 62 of them with high risk of bias, that evaluated the effectiveness of health programmes that included community engagement, compared with no or minimal engagement. Of the selected studies, all of them in English, 82 per cent were conducted in United States of America, 4 per cent of them were conducted in United Kingdom, and another

4 per cent were conducted in Canada. The remaining studies were conducted in other high-income countries (O'Mara-Eves et al., 2015). Additionally, 43 per cent of original research focused on ethnic minorities, and 26 per cent of them focused on socioeconomically vulnerable populations (O'Mara-Eves et al., 2015).

From their analysis, authors suggest that "there is solid evidence that community engagement interventions have a positive impact on a range of health and psychosocial outcomes, across various conditions" (O'Mara-Eves et al., 2015, p. 19). In particular, they found consistent evidence for a positive effect of community engagement on modification of health behaviours, improved health outcomes, perceived self-efficacy, and participants' social support (O'Mara-Eves et al., 2015). However, they also reported that there is inconclusive evidence for the maintenance of these positive effects with time (O'Mara-Eves et al., 2015). Albeit with no statistical significance, authors suggest that those interventions corresponding to peer delivery of health care services revealed the largest effects estimates on positive health outcomes, compared with participatory assessment of health needs or empowerment strategies (O'Mara-Eves et al., 2015). Furthermore, researchers also point out that the community interventions focused on a single health problem and for a short period, seemed to be more effective than longer and multidimensional health programmes, despite these result were not statistical significant (O'Mara-Eves et al., 2015). Authors also conclude that there is not enough evidence to sustain the relationship between community engagement and reduction of health inequalities through acting on broader social determinants of health (O'Mara-Eves et al., 2015).

Community participation in health, a "degenerating" research programme?

The lack of consistent evidence regarding community participation in health and health inequalities, have led some scholars to critically assess our current theoretical understanding of participation (Campbell & Cornish, 2014; Cornwall & Coelho, 2007; Rifkin, 2014). For most investigators in the field of community participation, the gap between normative assumptions and empirical research findings can be attributed to the lack of a common theoretical framework, the highly contextual character of participatory health programmes, and the methodological problems for evaluating complex public health interventions, as I described above (Cornish et al., 2014; Marston et al., 2013; Rifkin, 2014). Consequently, these scholars propose to address this epistemological problem through improving existing evaluation

methods, emphasising the importance of integrating qualitative research for a more appropriate assessment of social contexts, and of community participation as a process rather than a discrete health intervention (Cornish et al., 2014; Marston et al., 2013; Merzel & D'Afflitti, 2003; Rifkin, 2009, 2014). As Cornish and colleagues suggested, "the inconclusiveness of the findings reflects problems with the evidence, rather than indicating that [community mobilisation] is ineffective" (p. 1).

Contrasting with the above position, a second group of researchers in the field of community participation consider that the paucity of evidence supporting hypotheses for participation mainly corresponds to shortcomings in the theoretical foundations regarding community participation itself (Campbell, 2014; Cooke & Kothari, 2001; Fassin, 2008; Menéndez, 2008). In accordance, these authors call for a more profound critical assessment of the ideological and political assumptions underlying participatory programmes (Campbell, 2014; Cooke & Kothari, 2001; Menéndez, 2008; Williams, 2004b). Cook and Kothari (2001) perhaps provide one of the most profound and well-articulated criticisms in English, to the idea of participation. In their book "Participation: the new tyranny?" (2001), the authors argue for a radical theoretical and ideological critique of participatory approaches in the field of development, moving beyond the mere description of the difficulties in evaluation methods. As such, Cooke and Kothari (2001) suggest the possibility of rejecting participation and its "tyrannical potential" (p. 4), and to focus research on how local communities resist attempts of instrumentalisation and social control from external agencies through participatory programmes for development (Kothari, 2001). They sustain this claim in their proposition that often, participatory programmes not only do not improve people's living conditions, but also posit detrimental consequences for disadvantaged communities (Cooke & Kothari, 2001).

In this regard, other scholars have provided evidence that participatory health programmes often result in the instrumentalisation of vulnerable communities, due to the extension of social services through unpaid labour, in a context of gradual budget reduction of public services (Fassin, 2008; Hildyard, Hegde, Wolvekamp, & Reddy, 2001; Molina, Daquilema, & Gómez, 1992). Also, Cleaver (2001) and Williams (2004a) have pointed out to the depoliticising effect participatory programmes can exert on local communities. They argue that community participation is usually restricted to local and fragmented development programmes, isolated from broader social demands, and prompted by government institutions and external agencies for the legitimation of decisions that have been already decided elsewhere (Cleaver, 2001; Williams, 2004a). Similar insights are proposed by Hildyard et al. (2001) who, drawing on their

research on village forest committees in India, suggest that in most cases citizens' involvement within participatory programmes render credibility and legitimacy to top-down decisions that have been already taken outside these participatory arenas. In addition, various authors coincide in describing participatory programmes as interventions where government institutions, and other external stakeholders, can wield mechanisms for both social control and discipline of grassroots organisations (Bolados, 2009; Greaves, 2007; Kothari, 2001; Mosse, 2001).

More nuanced, yet still critical positions regarding this epistemological problem, come from scholars that have focused on the relationship between collective agency and socioeconomic structures, i.e., to what extent can local communities transform their broader oppressive and unequal contexts (Campbell, Cornish, Gibbs, & Scott, 2010; Cornish & Campbell, 2009; Hickey & Mohan, 2004; Williams, 2004a). According to Fraser (1990, 1995), the creation of spaces for citizen participation within democratic capitalist regimes, is based on the rationale that it is possible to insulate collective participation and local political processes from broader unequal socioeconomic structures, in what would constitute an autonomous and representative participatory arena. However, as Fraser (1990, 1995) and other authors evidence, the unequal social, economic, and political contexts in which communities exists are frequently reproduced - and sometimes reinforced - within these spaces for participation (Campbell & Cornish, 2010; Mahmud, 2007; Mosse, 2001; Von Lieres, 2007). In line with this perspective, Campbell's (2003) research in HIV/AIDS prevention programmes in South Africa, and Makhoul and colleagues' research in mental health among Palestinian youth in Lebanon (2013) contribute significantly to the understanding of how unequal socioeconomic and political contexts condition the development of community participatory health programmes.

Campbell and Cornish (2010) have also argued for the necessity of transforming broader symbolic, material, and relational contexts in order to enhance collective participation among most vulnerable communities, as it is described earlier in this chapter. The attention on the wider socioeconomic and political contexts in which participatory health programmes are exercised, have led these authors to research how social movements, beyond institutional experiences of collective participation in health, have been able to build "the voice of the poor', and to create "receptive social environments' (Campbell et al., 2010). Other scholars on community participation in health have also proposed to research social movements, considering their potential for tackling health inequalities and deepening democracy, in contrast to more fragmented and short-term basis of most institutional participatory health programmes (Fassin, 2008; Stephens, 2014). In addition, another group of researchers have called for

examining broader resistance strategies employed by local communities who oppose to what is considered in their view as illegitimate and instrumental participatory programmes (Hildyard et al., 2001; Kothari, 2001; Vincent, 2004).

From a more theoretical position, Fassin (2004) suggests that our understanding of community participation in health is limited, and require opening its definition to broader experiences of mobilisation outside health care centres. This position is also present in Howarth and colleagues' (2014) research, who suggest expanding the scope of participation, and to understand it as the capacity to create, maintain, and transform social representations. Drawing on their work (2014) and the epistemological contributions of Samaja (2004), it is possible to define community participation in health as the capacity to construct, to maintain, and to resist social representations of health, disease, and health care within a particular society. Social representations, defined as "systems of common-sense knowledge and social practice" (Howarth et al., 2014, p. 19) constitute the symbolic terrain in which community participation in health is enacted (Campbell & Jovchelovitch, 2000). Implicit in this later definition is the existence of multiple representational repertoires of health, disease and health care, aimed to maintain, to reproduce, to resist or transform health institutions and practices (Samaja, 2004). Accordingly, community participation in health cannot be considered as a beneficial process per se, but as a historical and conflicting social process that is situated within a specific mode of economic production and social organisation (Samaja, 2004). It is this latter definition of participation, which also encompasses the notion of social movements, that I will use throughout this research, in what I refer to as collective participation in health.

Research aims and organisation of this thesis

Considering the preceding discussion in the field of community participation in health, I argue that the latter could correspond to what Lakatos (1978) referred to as a "degenerating research programme" (p. 6), i.e., a research programme in which theoretical foundations do not seem to elucidate empirical anomalies, and is characterised by the formulation of essentially ad hoc hypotheses. As I have maintained above, I adopt a critical position regarding these theoretical assumptions of community participation in health. I seek to move beyond internal critiques referred to the methodological problems for the assessment of participatory programmes, concurring with those authors that suggest that "there is an urgent need to revisit the wider 'theory of change' that informs community mobilisation" (Campbell, 2014, p. 48). Therefore,

this research attempts to examine both the potential contribution of the theories of social movements to the field of community participation in health – and public health in general –, and the assessment of how socioeconomic and political contexts condition the development of collective participation in health. My broader research questions, which will be further refined in Chapter 3, are: which are the main differences between institutional spaces for participation in health and social movements? How, if at all, do these two forms of collective participation in health interact? And how do socioeconomic and political contexts influence both institutional spaces for participation in health and social movements?

Despite recent attention to social movements, there are important problems that have received little consideration within the field of community participation in health: the existence of multiple and competing theories on social movements, and the dynamic and historically contingent character of social movements and collective action in general, which, according to Salazar (2012), "are in process of development and unfolding, without acquiring definitive forms yet" (p. 404). For addressing these issues, in Chapter 2, I provide a revision of current theories of social movements, attempting to clarify the theoretical and ideological foundations that characterise each perspective. Albeit their differences, most of these theories coincide in emphasizing the cultural aspect of contemporary social movements, and the centrality of conflict within modern societies (Della Porta, 2015; Melucci, 1995; Barker, 2013). In this regard, social movements theories propose to understand conflict as an essential dimension of contemporary societies. It implies to look at protests, disruptive and non-conventional action, as well as those latent and submerged cultural practices of social movements, as the normal ways in which people create and transform societies (Cox & Gunvald, 2014; Tarrow, 2011; Touraine, 1985). In particular, I argue that a Marxist approach to social movements could contribute significantly to our current understanding of collective participation in health (Barker, 2013; Cox & Gunvald, 2014).

In Chapter 3, and consistent with a Marxist approach to social movements, I provide a detailed account of the socioeconomic and environmental contexts of Valle del Huasco, Northern Chile. Valle del Huasco is a territory where institutional spaces for participation in health coexist with broader social movements aimed at the protection of collective health and the environment. As such, it constitutes an exceptional setting for researching collective participation in health. In the first section of this chapter, I examine the institutional background for participation in health in Chile during the periods of transition to, and consolidation of democratic capitalism. In the second section, I conduct a revision of original

studies on collective participation in health in Chile. Despite little research on this subject, empirical research included in this revision coincide in pointing out the often instrumental and depoliticised character of participation (Bolados, 2009; Gideon, 2001; Greaves, 2005; Paley, 2001). In the third and fourth sections of this chapter, I provide a comprehensive description of the socioeconomic and environmental contexts of the territory. I attempt to provide a coherent narrative that highlight the dialectic relationship between the economic, social, and environmental contexts where this research is situated. In the final section of the chapter, titled "The Battle of Tatara in Freirina", I refer to the emergence and disruption of social mobilisations in 2012 due to environmental pollution in the territory, and I re-address and specify my original research questions: What has been the role of formal participatory spaces within health centres in a context of environmental conflict? How do these participatory spaces interact with broader social movements in the territory, such as *Brigada SOS Huasco*? And how do socioeconomic conditions influence spaces for institutional participation and social movements in Valle del Huasco?

In Chapter 4 I justify the methodology for this research. I argue that Marxism constitutes an appropriate methodology for conducting this investigation. Marxist methodology requires addressing four interrelated problems that derive from its dialectical approach: the transition from highly abstract ideas to more immediate and concrete research settings (Barker, 2013), the methodological approach to historical and contingent social phenomena, what is referred to as the "methodological capture of movement" (De la Garza, 2012, p. 236), the reconstruction of the concrete totality of the research subject (Sánchez, 2003), and the recognition of the researcher's own political praxis (De la Garza, 2012; Cox & Gunvald, 2014). I also describe in detail the research design, which corresponds to a nine-month critical ethnography conducted in Valle del Huasco, which is also consistent with the theoretical and methodological position I assume for this research. Additionally, I refer to the process of recruiting participants for this thesis, which included social movement participants, members of institutional spaces for participation in health centres, health workers, and regional and national governmental authorities. I further describe the data analysis and the procedures I utilised for ensuring research quality. Lastly, I discuss some of the limits of this research and the ethical considerations that guided this investigation.

From Chapters 5 to 7 I present the research findings. In Chapter 5, I describe local health councils, which are spaces for consultative and non-binding community participation in primary health care centres in Huasco (Salinas, 1996). In particular, I describe the perspectives

and observations conducted among members of local health councils and health workers from the primary health care centre Juan Verdaguer, and the community hospital Manuel Magalhaes Medling, both located in the city of Huasco. I also examine the narratives of regional and national health authorities regarding participation inside health centres in the territory. In Chapter 6, I provide a description of *Brigada SOS Huasco*, a grassroots organisation in the district of Huasco, and one of the main organisations within *Movimiento Socioambiental del Valle del Huasco*. Specifically, I examine their multiple strategies for mobilisation, and their critical perception of local health workers and government authorities regarding the environmental health problems in the territory. In Chapter 7, I refer in detail to the Programme for Environmental and Social Recovery of Huasco (PRAS, in Spanish). This initiative corresponds to a novel participatory programme where government authorities, civil society, including members of *Brigada SOS Huasco*, and the private economic sector meet to address environmental pollution and social problems in their territory. I argue that, despite originally intended as a depoliticised participatory programme, the presence of supporters and members of *Brigada SOS Huasco* turned this initiative into a highly politicised participatory space.

In Chapter 8 I develop a coherent and integrated account of collective participation in health in Valle del Huasco relating empirical research findings, and the broader theoretical revision, research context, and research methodology. In particular, I divide this chapter according to the specific research questions posited earlier in Chapter 3. For an orderly account, I mainly refer to the concepts of politicisation (Brown et al., 2011; Gunvald & Cox, 2013; Tapia, 2008), subjective and objective violence (Žižek, 2009), and capital accumulation by dispossession (Harvey, 2004; Meiksins, 2006; Svampa, 2012), which are examined in detail in Chapter 2. Additionally, I discuss the contributions of the theories of social movements to the field of community participation in health, highlighting the centrality of cultural conflict, human agency, and social transformation within contemporary societies (Della Porta, 2015; Melucci, 1985; Tarrow, 2011). Particularly, a Marxist perspective also contributes to consider social movements as mediated expressions of class struggle (Barker, 2013; Cox & Gunvald, 2014). In this regard, I propose that a Marxist approach to public health and community participation in health allow us to consider health promotion and community mobilisation as a political and subversive practice.

Chapter 2: Theoretical revision

In this chapter, I explain the theoretical foundations of this research. As I argued in Chapter 1, the recent interest of some scholars to the study of social movements within the field of collective participation in health, posits important epistemological problems that require a thorough revision of current theories of collective action. A first problem refers to the existence of many theories on social movements that differ, fundamentally, in the underlying assumptions regarding the relationship between culture, politics, and economy (Cox & Gunvald, 2014; Garcés, 2012). These differences, I argue, need to be recognised, due to the different methodological and political consequences of each approach if applied to the field of collective participation in health, and public health in general. A second theoretical problem corresponds to the difficulty to define clearly what social movements are, considering what it seems to be their historical unpredictability and contingent character (Barker, 2013; Houtart, 2006; Salazar, 2012). In this regard, the recent emergence of a myriad of social movements around the world after 2011, called into question many of contemporary theoretical assumptions of collective action in general (Della Porta, 2015; Garcés, 2012; Žižek, 2012). Therefore, I suggest that this theoretical revision could contribute to the understanding of this subject within the field of public health, given the current problems derived from the distance between normative assumptions and empirical research findings on community participation in health.

For this purpose, I divide this chapter into five sections. First, I address New Social Movements, as the theoretical developments surged in the late 1970s, most notably in Western Europe, that emphasised the cultural importance of collective action (Melucci, 1985; Touraine, 1985). Second, I refer to the Comparative Perspectives on Social Movements and Contentious Politics, which emerged in North America during the 1990s, that while recognising the centrality of culture on social movements, also attempted to retake the analysis of the state and traditional political actors into their study (McAdam, McCarthy, & Zald, 1996; Tarrow, 2011). Third, I include a theoretical revision of Health Social Movements, as a specific field within the Comparative Perspectives, but which provided novel insights related to both, the processes of politicisation of collective action, and the importance of socioeconomic conditions for the emergence of social demands (Brown et al., 2011; Brown & Zavestoski, 2004). Fourth, I address the theoretical contributions to the study of social movements from Latin America. Albeit these contributions do not represent a homogeneous theoretical corpus, it is possible to discern some common elements, including the influence of Critical Theory on social

researchers in Latin America (Boron, 2006; Garcés, 2012; Svampa, 2012), and the understanding of social movements as both, cultural and political collective action (Álvarez, Dagnino, & Escobar, 1998; Tapia, 2008; Urrutia, 2012). In the final section I refer in more detail to the theory of social movements from a Marxist perspective (Barker, 2013; Cox & Gunvald, 2014; Houtart, 2006), justifying its pertinence as a research methodology for this thesis, as I will further argue in Chapter 4.

New Social Movements

Contemporary research in social movements, as a specific subject among social sciences, emerged most notably in Western Europe and North America during the 1970s and 1980s. This was amid widespread protests of students, women, and civil rights activists, among many others, that posed serious political challenges to seemingly consolidated democratic capitalist societies (Della Porta & Diani, 2006; McAdam et al., 1996; Salazar, 2012). Previous theories within the social sciences were inadequate for analysing the appearance of these new social movements that diverged in both, their constituencies for protest and in the content of their demands, from more traditional collective action among peasants, workers, and the bourgeoisie (Della Porta & Diani, 2006; Salazar, 2012). On the one hand, prevailing functionalist theories of that time considered social movements as irrational, disruptive, and even "pathological" reactions of the excluded due to structural crisis within societies (Melucci, 1985, p. 791). On the other hand, structuralist theories proposed that collective mobilisation and protests were the mere result of underlying socioeconomic structures (Melucci, 1985; Touraine, 1985). Within orthodox Marxism in particular, any social movement or collective action that differed from the working class and its political organisations was considered, at best, as a secondary or auxiliary movement for the proletariat (Barker, 2013; Cox & Gunvald, 2014; Gunvald & Cox, 2013). As such, students' protests, women' struggles, and civil right activism did not receive as much attention compared to working class and peasants' movements (Garcés, 2012).

Touraine (1985, 1995) was one of the first scholars to introduce the concept of "new social movements" to refer to the collective action of relatively integrated middle classes that, contrary to more traditional social movements, focused mainly on non-material claims within post-industrial societies. According to Touraine (1985, 2002), post-industrial societies are characterised by the increasing importance of communication and information technologies, which in turn increase the capacity of societies to produce cultural over material goods, the

latter being predominant in industrial societies. Culture, defined as the "voluntaristic construction of a set of norms and practices" within a specific society (Touraine, 1998, p. 140), gradually acquired autonomy from underlying socioeconomic structures, and constituted the main terrain where social movements developed their demands and strategies (Touraine, 1985, 1995, 2002). For Touraine (1995, 1998), cultural production implies the existence of cultural conflict among different social groups, one of them dominant, which struggles to control, suppress, or limit the other's cultural norms and practices, making "possible the construction of a unified society, which, without a cultural unity, would appear segmented or organised merely around the division of labour" (Touraine, 1998, p. 141).

Particularly, Touraine (1985, 1995) developed a notion of social movements as collective actions organised around a central conflict within a society, in which different social actors struggle for resources. If in industrial societies the central conflict was around industrial and material production, in post-industrial societies the central conflict corresponds to the production and interpretation of social norms and practices that constitute culture, and therefore social actors struggle for cultural resources (Touraine, 1985). Although Touraine (1985, 1995) acknowledged the existence of movements that included political and economic demands, in strict sense these types of collective action would constitute historical movements, and not social movements. For this author, historical movements correspond to collective attempts to direct the historical transformations of societies, i.e., the transition of one type of society to another, which are characteristic of peripheral and industrial societies (Touraine, 1985, 1989). In post-industrial societies, historical movements would correspond to derived or partial social conflicts, subordinated to the central type of conflict which is essentially cultural (Touraine, 1985, 1995). As such, new social movements were mainly oriented towards the central type of conflict, i.e., the production, maintenance, and transformation of cultural norms and practices, which would be a characteristic of modern liberal, democratic, and postindustrial societies (Touraine, 1985, 1995).

Touraine's emphasis on culture allowed him to propose the sociology of collective action or social movements (1985, 1995). This notion constituted a profound transformation within social sciences, and in particular sociology, for the study of society and social transformation (Salazar, 2012). If social movements were previously seen as deviations, as disorders, or as unintended consequences of structural conflict, within this new perspective, social movements and collective action in general, were considered as the fundamental subjects of cultural production (Touraine, 1985, 1995). In this regard, a major methodological contribution of the sociology

of collective action is the comprehension of social movements as the submerged and permanent collective cultural action performed within civil society, departing from previous methodological perspectives that often considered social movements as the explosive, "volcanic", and short-term action of people (Touraine, 1985, p. 772). In consequence, Touraine (1985, 1995) insisted on focusing social research on the everyday activities that construct, maintain, and challenge existing representations and practices of societies, in what he referred to as the period of latency of social movements. Furthermore, Touraine suggested that social movements do not correspond to real or objective social entities, but to a "specific mode of constructing social reality" (1985, p. 749).

According to the sociology of collective action, social movements act eminently within civil society as an increasingly distinguishable field in relation to the state and traditional political parties in post-industrial and liberal societies (Touraine, 1985, 1995). In this regard, Touraine pointed to "the destructive effect of the state on social movements", arguing that social movements could only develop in "genuine capitalist" countries (1995, p. 379) since it was in these societies where the reduced role of the state allowed the flourishing of civil society. On the contrary, peripheral, non-modern, and totalitarian communist societies were characterised by the existence of a central bureaucracy that impeded the emergence of modern citizenship and social movements (Touraine, 1995). The interrelated ideas of social movements essentially restricted to the struggle for cultural resources, and their increasing distance from the state, led this author to argue that not only were social movements uncommon in peripheral societies, such as in Latin America (Touraine, 1989), but that social movements are disappearing around the world because of the increasing political and economic content of contemporary collective action (Touraine, 2002, 2004). In this regard, the notion of an increasing separation between civil society, the state, and traditional political parties, or between cultural, political and economic dimensions that characterise Touraine's sociology of collective action, posits several epistemic and methodological problems for the contemporary study of social movements, especially within the Latin American context (Garcés, 2012; Salazar, 2012).

Melucci (1985, 1995) also highlighted the importance of culture for the study of social movements, yet proposed a more nuanced separation between social movements and the state. He argued that the gap between state, political institutions, and social movements corresponds, essentially, to a new political space (Melucci, 1985, 1995). On the one hand, he noticed the difficulty, and even impossibility, of traditional political parties to represent and articulate new social movements' demands (Melucci, 1985). On the other hand, he also acknowledged that

new social movements do influence and confront political institutions, often demanding material improvements and political inclusion (Melucci, 1985, 1995). However, Melucci (1995) insisted that new social movements cannot be reduced to political participation, but that their most important role is the incessant production of culture. For Melucci, social movements actively create and transform culture, agreeing with Touraine (1985, 1995) in that there is increasing autonomy of the cultural sphere from the socioeconomic structure and that these new social movements are inherent and permanent actors within post-industrial or advanced capitalist societies (Melucci, 1985, 1994).

Specifically, Melucci proposed that social movements constitute a "form of collective action (a) based on solidarity, (b) carrying on a conflict, [and] (c) breaking the limits of the system in which action occurs" (Melucci, 1985, p. 795). For this author, social movements are created and maintained through the development of networks of conflicting solidarity, as the submerged forms of political participation within civil society (Melucci, 1985). These networks of solidarity allow individuals to have multiple memberships in different groups, to devote part of their time to a collective endeavour, and to create and maintain relationships of affection and solidarity among its members based on shared representations of "opportunities and constraints to social action" (Melucci, 1985, p. 793). He also discussed the cycles of latency and visibility within new social movements, arguing that these moments are intimately correlated. If latency contributes to the establishment of relationships of trust and reciprocity among its members, and promotes the creation of new cultural patterns, it is in those moments of visibility, such as public mobilisation and protests, when these relationships are strengthened, allowing for the incorporation of new members and cultural patterns to be disseminated (Melucci, 1985). In this regard, Melucci (1985) proposed the central idea that social movements have a prophetic function, referring both, to their denouncing of fundamental conflicts within societies, and to their active creation of new cultural patterns and values within contemporary societies.

From a methodological point of view, Melucci (1985, 1995) also contributed to the understanding of social movements as a result, and not as a starting point of collective action. This idea resonated with Touraine's suggestion to the focus research on social movements on the daily activities and networks of cultural production within civil society, and not to reduce analysis to moments of public visibility (1985, 1995). It was also implied that the moment of visibility of social movements must be contextualised and apprehended in relation to those submerged periods of cultural construction and development of networks of trust and solidarity

among its members (Melucci, 1985). Consistently, Melucci proposed to comprehend a social movement as a fundamentally analytical level for research, and not to reduce it to an empirical social phenomenon: "to consider a movement as an action system means to stop treating it just as an empirical phenomenon. The empirical forms of collective action are objects of analysis, and they are not meaningful in themselves" (Melucci, 1985, p. 793). From Melucci's methodological position, research on social movements implies, firstly, to look at those non-visible aspects of collective action, and to address the period of latency of social movements as the essential moment of social research (1985, 1995).

Comparative Perspectives on Social Movements and Contentious Politics

A second theoretical perspective on social movements and collective action in general, corresponds to the Comparative Perspectives on Social Movements (McAdam et al., 1996), and more recently, to what is known as Contentious Politics (McAdam, Tarrow, & Tilly, 2007; Tarrow, 2011). Comparative Perspectives on Social Movements refers to the efforts made mainly by scholars from United States of America to provide a consensual synthesis of different theoretical traditions on social movements in the mid-1990s. It attempted to address diverging epistemological and methodological positions on social movements and collective action. This included structuralism and its emphasis on institutional conditions for the emergence and development of social movements (McAdam et al., 1996; McAdam et al., 2007); rational choice and the micro foundations of collective behaviour (Kriesi, 1996; McCarthy, 1996); and constructivism, related to the production and reproduction of culture, mainly represented by New Social Movements perspectives, as described above (Melucci, 1985; Touraine, 1985; Zald, 1996). In this regard, the Comparative Perspectives on Social Movements integrated and developed three main themes within this field of research, i.e., political opportunities, mobilising structures, and framing processes (McAdam, 1996; McAdam et al., 1996; McAdam et al., 2007).

Political opportunities refer to the structural political basis that conditions the emergence and development of social movements, an area relatively unnoticed by scholars on New Social Movements (McAdam, 1996; Tarrow, 2011). Specifically, McAdam (1996) described political opportunities as the "relative openness or closure of the institutionalised political system", "the stability or instability of that broad set of elite alignments that typically undergird a polity", "the

presence or absence of elites allies", and "the state's capacity and propensity for repression" (p. 27). Tarrow (1996) specified that the notion of political opportunities refers "to consistent – but not necessarily formal, permanent, or national – signals to social or political actors which either encourage or discourage them to use their internal resources to form social movements" (p. 54). Among these political signals, he included the opening up of access to power, shifting alignments, the availability of influential allies, and cleavages within and among elites (Tarrow, 1996, 2011). For these authors, an open institutional political framework would be associated with the unfolding of more institutional strategies by social movements, contrary to more restricted political institutions, which would relate to non-institutionalised political strategies and more radical demands from social organisations (McAdam, 1996; Tarrow, 1996). Della Porta (1996) also suggested that state policies to protest, i. e., "the police handling of protest events" by the state (p. 62), as a more general term than just repression, could be considered an expression of general political opportunities in any contemporary society.

The pre-eminence of the political opportunities approach within the framework of Comparative Perspectives on collective action, led Tarrow (2011) to call for integrating the study of social movements into the broader notion of Contentious Politics. This author defined contentious politics as the collective action, such as social movements, civil wars and revolutions, that is distinguishable from, and opposed to, institutional politics (Tarrow, 2011). As such, contentious politics corresponds to "the irreducible act that lies at the base of all social movements, protests, rebellions, riots, strike waves, and revolutions". For McAdam et al. (2007), contentious politics refers to the public and collective demands articulated by a group of people against another group of people, and which usually involves the interaction with the state. Tarrow (2011) also argued that "collective action becomes contentious when it is used by people who lack regular access to representative institutions, who act in the name of new or unaccepted claims, and who behave in ways that fundamentally challenge others or authorities" (p. 7). Contentious politics, he went on to explain, is produced and innovated at the margins of historically "known repertoires of contention", but which are usually restricted to a limited number of collective strategies (Tarrow, 2011, p. 6).

What would distinguish social movements from other contentious actions are their more sustained interaction with other antagonist groups, and the development of well-structured networks of solidarity and shared cultural patterns and collective identities among their members (Tarrow, 2011). More precisely, Tarrow (2011) defined social movements as "collective challenges, based on common purposes and social solidarities, in sustained

interaction with elites, opponents, and authorities", founded in the recognition of a collective common identity that can sustain collective action (p. 9). For McAdam et al. (2007), social movements constitute a recent social phenomenon which "only took shape about two centuries ago, and only became widely available as means of popular claim making during the 20th century" (p. 19). According to these authors, and coinciding with Touraine (1985) and Melucci (1985, 1994), this occurred mainly in post-industrial and liberal democratic regimes in Western Europe and North America, where there were institutional spaces for peaceful citizen participation with moderate repression (McAdam et al., 2007; Tarrow, 2011). There were also minimum conditions required for exercising political and civil rights along with a pluralist and open mass media (McAdam et al., 2007).

Methodologically, the theoretical framework of Comparative Perspectives and Contentious Politics contributed to the study of collective action, and social movements in particular, by emphasising their relational and interactive character with other social groups and state institutions (McAdam et al., 2007; Tarrow, 2011). This approach differed from New Social Movements' perspective, which focused on social movements and collective action from a relatively more autonomous and isolated theoretical position (McAdam et al., 2007; Tarrow, 2011). Social movements, according to the Contentious Politics approach, are eminently relational, highlighting the interaction with other non-contentious political actors, such as state institutions, traditional political parties, and other more formal civil society organisations (Tarrow, 2011). In this regard, social movements would constitute, from a methodological perspective, relatively stable and low-level political organisations within liberal democratic societies (Cox & Gunvald, 2014). Another methodological contribution from Contentious Politics to the study of social movements is its broader understanding of social movements and more radical and violent mechanisms of collective action, not as separate empirical social phenomena, but within a continuum which is conditioned by the political opportunities existing in any specific society (Tarrow, 2011).

More recently, Della Porta (2015, 2016) provided a theoretical approach that, albeit originally started within Comparative Perspectives on Social Movements, also emphasises the interdependence of cultural, political, and economic spheres for analysing social movements. This contrasts to the relatively fragmented approach of previous authors within this theoretical position, who address each variable, i. e., the cultural framework, political opportunities, and organisational resources, as rather independent and ahistorical variables (Cox & Gunvald, 2014; Della Porta, 2015). She also stressed the importance of objective conditions, beyond political

opportunities, that are at the base of people's shared grievances, and the potential development of social movements (Della Porta, 2015, 2016). From her research in anti-austerity protests in Southern Europe, and in the re-emergence of social movements around the world after 2011 (Della Porta, 2015, 2016), she noticed the complex effects of recent changes in socioeconomic conditions over the social basis, collective identity development, and political strategies of contemporary social movements. These changes in socioeconomic conditions within post-industrial societies, she argued, are related to the expansion of global capitalism, including the accelerated imposition of austerity measures in many countries, and the crisis of liberal democratic regimes all over the world (Della Porta, 2015). As such, Della Porta (2015) suggested to bring capitalism back to the study of social movements and collective action, as a specific mode of economic and cultural production of society, in contrast to a more partial and acritical understanding of liberal democratic societies which is characteristic of other authors within the former theoretical perspective, as suggested above.

Della Porta and Diani (2006) defined social movements as a "distinctive social process, consisting of the mechanisms through which actors engaged in collective action: are involved in conflictual relations with clearly identified opponents; are linked by dense informal networks; [and] share a distinct collective identity" (p. 90). For Della Porta (2015, 2016), contemporary social movements, such as anti-austerity movements in developed countries, are constituted by what she referred to as the precariat, the well-educated, unemployed or precarious young workers who are not entitled to the benefits of traditional working classes within post-industrial societies. These recent changes in the social basis for protests would be intimately linked to neoliberal transformations of capitalist relations of production (Della Porta, 2015, 2016). This would include the geographical redistribution of the proletariat, the development of new mechanisms for economic exploitation such as the outsourcing of services, and the reduction of the provision of welfare services, including health, education, and pension systems (Della Porta, 2015, 2016). In this regard, she described how the social bases for protest have gradually changed since the theoretical description of new social movements in the 1970s, from middle classes with fragmented cultural demands, to the precariat that characterised protests in Southern Europe, the Middle East, and the North African region since 2011 (Della Porta, 2015).

Furthermore, and regarding the construction of a collective identity, a theme previously developed by scholars on New Social Movements (Melucci, 1985; Touraine, 1985), she acknowledged that capitalism does not only correspond to a specific mode of economic

production, but is associated with the predominant cultural values of material consumption, hedonism, and individualism that characterise contemporary societies (Della Porta, 2015). She noticed that though socioeconomic conditions are not directly translated into cultural values and collective identities, culture is not constructed and reconstructed in a social void, but within the limits of specific historical material conditions (Della Porta, 2015). In this sense, she differed from the New Social Movements' perspective, and to a certain extent, from the Comparative Perspective on Social Movements, by emphasising the relational and dialectic approach between economic, political, and cultural spheres (Della Porta, 2015, 2016). As such, Della Porta (2015) argued that the cultural sphere of capitalist societies poses several difficulties for the constitution of collective identities and social movements, especially among most deprived communities:

Research on the labour movements of the past as well as on recent campaigns against neoliberalism in Latin America has shown that exploited and marginalized groups also mobilize against their conditions, but that building the necessary resources is a long and complex process. In balance, social movement studies would therefore expect participation in protests not by the most affected, but by coalitions of different social groups that have grievances on which to mobilize as well as resources that support mobilization. Research on the global South has pointed indeed at the mobilization of coalitions of public sectors employees as well as workers in the declining industries, of young unemployed expelled from the labour market, retired people who see their life quality worsening facing a cut in pensions and in welfare services. (Della Porta, 2015, p. 64)

Health Social Movements

Sustained in the theoretical tradition of comparative perspectives on social movements, Brown and colleagues (Brown et al., 2011; Brown & Zavestoski, 2004; Brown et al., 2004) have developed and moved forward the notion of Health Social Movements, as a specific area within social movements and collective action. For them, health social movements refer to "collective challenges to medical policy, public health policy and politics, belief systems, research and practice which include an array of formal and informal organisations, supporters, networks of cooperation and media" (Brown & Zavestoski, 2004, p. 679). Their definition, drawing on the political opportunities framework of the Comparative Perspectives on Social Movements, also acknowledges the relationship between health demands, illness constituencies, and broader socioeconomic conditions that affect people's health (Brown et al., 2011; Brown & Zavestoski,

2004; Brown et al., 2004). Therefore, Health Social Movements take distance from New Social Movements' perspectives on collective action that understand collective demands within an increasingly autonomous cultural sphere. In this regard, these authors agree with Della Porta (2015), challenging the concept of classless movements within the theory of New Social Movements, and to a certain extent within the comparative perspectives on social movements, since health status is intimately shaped by the category of socioeconomic status:

Because health concerns are so pervasive throughout society, people are more likely to focus many grievances through a lens of health. For example, during an economic recession and periods of high unemployment, it is understandable that people will make demands for broader and better health insurance and for expansion of coverage to include the uninsured. Similarly, in an industrial society where environmental degradation is increasingly visible and in which the government has begun to roll back decades of environmental regulation and protection, it becomes clearer for the public to connect health with socioeconomic, political and institutional concerns and begin pushing for increased regulations on industrial production and enhanced community participation in the formation of environmental policy. (Brown & Zavestoski, 2004, p. 685)

For these authors (Brown et al., 2011; Brown & Zavestoski, 2004), health social movements can be preliminarily categorised into three ideal types, usually with less delimited boundaries, depending on their main goals. These three types are: a) health access movements, b) embodied health movements, and c) constituency-based health movements. Health access movements are mainly focused on equitable access and expanding health care to under-served populations, or to resist austerity policies aimed to cut down health care service delivery (Brown et al., 2011; Brown & Zavestoski, 2004). Constituency-based health movements struggle for equity in health care, taking into consideration epidemiological inequities related to ethnicity, gender, and class, among others (Brown et al., 2011; Brown & Zavestoski, 2004). Embodied health movements (EHMs) can be described as collective endeavours aimed to challenge established medical discourses and practices related to certain types of diseases and disabilities (Brown et al., 2011; Brown & Zavestoski, 2004; Brown et al., 2004): "we view EHMs as organised efforts to challenge knowledge and practice concerning the aetiology, treatment, and prevention of disease" (Brown et al., 2004, p. 54). According to these researchers, embodied health movements share three distinctive characteristics in relation to other social movements, i.e.: these movements challenge traditional limits of scientific knowledge, emphasise the bodily experience that provides a material and experiential basis for mobilisation, and develop strategic

networks of solidarity and advocacy among civil society, health workers, and scientists (Brown et al., 2011; Brown et al., 2004).

In this regard, these authors suggest that embodied health movements have pushed for a "scientization of society" (Brown et al., 2004, p. 17), referring to the redefinition of traditional boundaries of scientific and lay knowledge (Brown et al., 2011; Brown & Zavestoski, 2004; Brown et al., 2004). On the one hand, health social movements appropriate scientific discourses for their demands and strategies, they actively participate in health research, and promote investigations on specific health issues (Brown et al., 2011; Brown & Zavestoski, 2004). On the other hand, collective action in health also challenges the taken-for-granted neutrality of scientists, points out ethical conflicts in research and scientific practice, and reveals the political and economic interests underlying science (Brown et al., 2011; Brown & Zavestoski, 2004). Likewise, health social movements also emphasise the importance of experiences of illness and patients' accounts as a valuable type of knowledge for the understanding of health problems (Brown et al., 2011; Brown et al., 2004). Finally, health social movements posit broader epistemological challenges to health research and practice, since they highlight the occasional dual role of scientist and activists (Brown et al., 2011; Brown & Zavestoski, 2004; Brown et al., 2004).

Furthermore, they develop the notion of "politicised collective illness identity" (Brown et al., 2004, p. 60) as the collective identity constructed through individual, yet shared experiences of illness that constitutes the basis for health social movements. According to these authors, a collective illness identity can be referred to as both personal and familiar experiences involving health problems and health care access in relation to a particular illness (Brown et al., 2011; Brown et al., 2004). A collective illness identity, these authors argue, could turn into a politicised collective identity when individuals and groups look at broader inequalities as the cause of their health problems (Brown et al., 2011; Brown et al., 2004). This can also be developed when they recognise that their illness is beyond individual and family responsibilities, but is intimately related to the existence of antagonist social actors and unequal power relations in society deemed responsible for the difficulties in prevention of a specific disease and accessing treatment (Brown et al., 2011). Among these, one can include the state, medical associations, and pharmaceutical industries (Brown et al., 2011). "In short, a politicised collective illness identity begins the process of transforming a personal trouble into a social problem" (Brown et al., 2004, p. 61).

Latin American contributions to the study of social movements

In Latin America, original research on social movements initiated during the 1980s and 1990s, amid cycles of authoritarian and liberal democratic regimes, widespread socioeconomic inequality and poverty, and foreign political intrusion (Almeida, 2002; Seoane, Taddei, & Algranati, 2006; Walton, 2001). Social movements in Latin America have persistently articulated most of their demands against unequal socioeconomic conditions, including the expansion of social services such as education, housing, health, democratic inclusion, and more recently, around environmental degradation (Almeida & Cordero, 2017; Seoane, 2001; Wickham-Crowley & Eckstein, 2017). This contrasts with new social movements in more stable democratic capitalist regimes in Western Europe and North America, that initially mainly revolved around non-material demands (Melucci, 1985; Touraine, 1985). Similarly, social movements in this region have often, in varying and contradictory ways, related to the state and more traditional political institutions (Roberts, 1998; Salazar, 2012; Svampa, 2008, 2009). Despite a long history of social mobilisation and collective action in the continent, scholars in Latin America started studying regional social movements relatively late (Garcés, 2012; Salazar, 2012). They mostly focused on massive protests to overthrow authoritarian regimes, as is the case in Chile, Peru and Argentina (Garcés, 2012; Paley, 2001; Roberts, 1998), or against austerity measures during the debt crisis in the Latin American region in the 1980s and 1990s (Almeida, 2002; Almeida & Cordero, 2017; Walton, 2001).

According to Salazar (2012), during this initial period, social movements were still studied by political scientists, sociologists, and political elites, as collective deviances and disruptions that endangered the stability of democratic transitions from authoritarian regimes in many countries in the region. As such, their study was mainly oriented towards social movements' political neutralisation or co-option, aiming to diminish their increasing political importance within fragile democratic regimes (Garcés, 2012; Paley, 2001; Roberts, 1998; Salazar, 2012). Another reason for the delay in their research relates to the pre-eminence of an orthodox Marxist approach among scholars studying social movements in Latin America (Garcés, 2012; Svampa, 2009; Wickham-Crowley & Eckstein, 2017). In this regard, Garcés (2012) argues that dialectical materialism in the region, although justified in both the importance of working class movements, and the persistence of material inequalities and poverty, led to the comprehension of these new social movements as auxiliary social movements that did not receive as much academic attention, as explained above. Svampa (2010, 2012) also suggests that demands from peasants and indigenous people, which mainly related to socioenvironmental degradation in

the region, were historically disregarded by traditional left-wing political parties and social researchers.

A notable early contribution to the study of social movements during the mid-1990s came from the field of anthropology by Álvarez et al. (1998) whose ideas differed from mainstream theories of social movements which understood the cultural space as distinct to the political space. Álvarez et al. (1998) proposed that culture itself is a space for politics, and in turn, politics is a type of cultural practice. These authors argued that, on the one hand, political practices and institutions are bounded to culture (Álvarez et al., 1998; Dagnino, 1998). In this regard, what counts, and what does not count as politics, can be understood as the socially accepted or disqualified mechanisms for political participation, which in turn are related to the prevailing normative concepts of democracy and citizenship within societies (Álvarez et al., 1998). On the other hand, they argued that traditional politics, including political parties and the state, often act within the cultural sphere, in a permanent and incessant process of cultural production, direction, and transformation (Álvarez et al., 1998; Dagnino, 1998). Accordingly, culture constitutes itself as a field for political struggle. Since social movements in Latin America often challenge prevailing cultural patterns and norms related to politics, redefining ideas of participation, empowerment, and democracy, it is important to think of social movements as both cultural and political simultaneously (Álvarez et al., 1998; Dagnino, 1998).

Tapia (2008) developed similar insights, proposing that social movements "begin to take shape when collective action starts to overgrow traditional political spaces, both within civil society and the state" (p. 55). He referred to social movements as political struggles that are not part of the state nor belong to any traditional political institution, and therefore are frequently disqualified regarding the prevailing understanding of what constitutes appropriate and legitimate political channels for addressing social demands (Tapia, 2008). According to this author, the production and reproduction of the political order essentially requires the institutionalisation of political practice in order to normalise it, and to legitimise existing representations of power, democracy, and participation (Tapia, 2008). Social movements, he added, correspond to neither a specific nor contained political space, but manifest themselves in the politicisation of existing social spaces and social networks (Tapia, 2008). As such, social movements diverge from other formal organisations within civil society that accept existing political roles, and negotiate their relative social and political position within existing structural boundaries (Tapia, 2008). Accordingly, social movements would constitute a collective and public challenge to institutional and legitimised political practices. In other words, social

movements would constitute a "displacement of politics", and "a way of politicisation of social places and social relations that were previously neutralised or depoliticised" (Tapia, 2008, p. 56).

Urrutia (2012) also pointed to the eminently political character of social movements, and proposed the notion of politicisation as the introduction of disorders within the functioning of society, an essential characteristic of Latin American social movements. Specifically, politicisation refers to the collective recognition of shared grievances among people, their relation to broader unequal socioeconomic conditions, and the existence of antagonist interests among social groups (Urrutia, 2012), which coincides with the notion of "politicised collective illness identity" within the framework of health social movements (Brown et al., 2011; Brown et al., 2004). For Urrutia (2012), the politicisation and depolitisation critiques that are frequently articulated against social movements in the region, can be explained from a restricted cultural notion of politics, referred mainly to the existence of traditional political parties, representative political authorities, and universal suffrage. This notion of politicisation is clearly manifested, he suggested, from the critiques addressed to social movements from traditional political parties (Urrutia, 2012). On the one hand, conservative and liberal perspectives criticise what they refer to as the politicisation of what should be apolitical social demands, insisting that politics should be restricted to existing political institutions (Urrutia, 2012). On the other hand, more progressive and left-wing political perspectives criticize social movements because of what they perceive as the depolitisation of social demands, referring to the fact that social movements do not address their grievances through their own political parties and the broader political system (Urrutia, 2012).

The discrepancies that exist between the social basis for protest among more stable capitalist democracies and Latin American social movements also implies different theoretical assumptions regarding the emergence and maintenance of these social movements (Houtart, 2003, 2006). The expansion of the social basis and frequency of protests in Latin America, from working class organisations to other new social actors such as students, women, and indigenous groups, would be directly related to the broader process of capitalist globalization (Almeida & Cordero, 2017; Wickham-Crowley & Eckstein, 2017). In this sense, Salazar (2012) suggests that the study of these new social movements requires a detailed consideration of the structural and symbolic changes within neoliberal societies during the last decades. Accordingly, the expansion of the social basis for protest in Latin America, would not respond to Touraine's assertion (1985) that conflicts are relocated from the economic to the cultural arenas, but

because changes in economic structures are manifested in the cultural sphere (Salazar, 2012). These theoretical developments also coincide with Della Porta's (2015) emphasis on the interrelation between economic and cultural spheres, and the emergence of the precariat, as discussed above. Consequently, the rapid transformations in social movements are mainly due to the accelerated process of economic globalisation (Della Porta, 2015; Houtart, 2006; Salazar, 2012). Since these socioeconomic transformations are rapidly evolving, then "social movements, if they respond to the real history of systems – what seems evident today – then, they are in process of development and unfolding, without acquiring definitive forms yet" (Salazar, 2012, p. 404).

Recently, one of the most significant contributions to the study of social movements in Latin America corresponds to Svampa (2008, 2012). She situated research on social movements and collective action within a broader context of neo-extractivism, as a specific phase of neoliberal transformations which started in the region in the 1990s (Svampa, 2010, 2012). For Svampa (2012), neo-extractivism refers to an economic model of capitalist development sustained in the large-scale, and capital-intensive exploitation of natural resources in Latin America by transnational industries, such as mega mining and agriculture. It also refers to the consequent environmental and social problems that affect geographically excluded communities in territories previously regarded as expendable by political authorities and economic elites (Svampa, 2012). The neo-extractivist transformations in Latin America have also been accompanied by the ambivalent relationship between social movements and progressive governments and political parties (Svampa, 2008, 2012). This ambivalence, she argues, is expressed in the relative opening of spaces for citizen participation and the expansion of social services among the poor, but also in the criminalisation of social protests, particularly against indigenous and environmental social movements, and the militarisation of conflictual territories that affect mainly peasants and indigenous populations (Svampa, 2008, 2009, 2012).

Consistent with the above, Svampa (2008, 2010) emphasises the territorial character of social movements in Latin America, a theoretical element relatively absent from previous developments within the field of collective action. She argues that social movements in the region have appropriated their territories in relation to neo-extractivism both symbolically and materially, especially among indigenous groups and socioenvironmental movements, as described in the preceding paragraph (Svampa, 2010, 2012). The appropriation of the territory also refers to the gradual process of focalisation of social policies for poverty within urban settlements in the region under neoliberal regimes, requiring the delimitation of geographical

areas by political authorities, and the spatial contention of excluded social groups (Svampa, 2010, 2012). The territorialisation of poverty in cities in Latin America led to the emergence of a collective identity among excluded social groups that was profoundly bounded to the local territory and which shaped the basis for social protest and the content of social movements' demands (Svampa, 2008, 2009). Accordingly, the territory became a space of resistance and meaning, especially in relation to neo-extractivism, the focalisation of social policies, and the contention of the excluded (Svampa, 2008, 2009).

Svampa (2008, 2010) also conceptualises what she refers to as the "plebeian" character of social mobilisation in Latin America, denoting a series of characteristics of collective participation in the region that include the prominence of direct and disruptive action of excluded social groups. The plebeian character of social movements also refers to the emphasis that social movements' participants place on the autonomy of grassroots organisations and assembly democracy in particular, and the relative obsolescence of traditional protests (Svampa, 2008, 2010). These new repertoires of protests and organisation are developed in contexts of profound socioeconomic inequalities, and highly asymmetrical and exclusionary access to political power (Svampa, 2008, 2010). For this author, "in political and cultural terms, the plebeian refers to a process of self-affirmation that implies, on one hand, vindication of what is popular, to be negated and excluded, and on the other hand, a rejection and contest of iconoclast and antielitist character, in relation to dominant culture" (Svampa, 2009, p. 18). In this regard, the concept of the plebeian also resonates, to a certain extent, with Della Porta's description of the precariat (2015), as a distinguishable social actor different than the traditional working class, and the integrated middle classes that characterised Western European and North American new social movements.

Marxism and social movements

A Marxist approach to the study of social movements requires, from the start, to take distance from structuralist perspectives that situate human agency and collective action as results or as mere expressions of underlying social and economic structures (Barker, 2013; Gunvald & Cox, 2013; Žižek, 2012). These structuralist perspectives were predominant within orthodox Marxist positions, and are best represented in the late theoretical developments of Frederic Engels, and in Louis Althusser's structuralist Marxism (De la Garza, 2012; Leyva & Sampaio, 2012). On the contrary, a more adequate approach to the study of social movements within the broader

Marxist tradition, implies to look at the theoretical developments of many Marxist scholars during the 20th century that, consistent with the Philosophy of Praxis, attempted to recover the essential role of social subjects for the overcoming of capitalism (Boron, 2006; Leyva & Sampaio, 2012; Sánchez, 2003). These include, among many others, the intellectual work of Rosa Luxemburg, Antonio Gramsci, Edward Thompson, and those scholars associated to the Frankfurt Institute for Social Research (Leyva & Sampaio, 2012; Sánchez, 2003). Similarly, a Marxist approach to the study of social movements and collective action in general, also needs to consider the multiplicity of social subjects that are struggling for social transformation, and not disregard them in the light of the traditional working class movement, as it has been the case within more orthodox Marxist positions (Cox & Gunvald, 2014; Houtart, 2006; Žižek, 2012).

Having said that, within a Marxist perspective, Barker (2013) defines social movements as the collective action that is sustained in a collective project and common representations, aimed at solving a shared demand. Gunvald and Cox (2013) go further to explain that social movements are process where a "social group develops a collective project of skilled activities centred on a rationality - a particular way of making sense of and relating to the social world - that tries to change or maintain a dominant structure of entrenched needs and capacities" (pp. 65-66). Barker (2013) and Gunvald and Cox (2013) coincide with non-Marxist theoretical positions in describing social movements as reticulate and loose organisations, situated mainly within civil society and which are distinguishable, but interrelated, to the state and traditional political parties. Similarly, a Marxist approach also agrees with previous theories on social movements on both the centrality of conflict and collective action in the development and functioning of contemporary societies, and the importance of culture and collective identities for the emergence of new social movements (Barker, 2013; Cox & Gunvald, 2014; Gunvald & Cox, 2013). What differentiates a Marxist approach to social movements from preceding theoretical positions, such as New Social Movements, and Comparative Perspectives, is that the former comprehends social movements as the historical expression of class conflict (Barker, 2013; Cox & Gunvald, 2014).

Social movements exist and act eminently within the cultural sphere of a specific society, creating, maintaining, and eventually transforming predominant representations of democracy, citizenship, and the state (Barker, 2013; Cox & Gunvald, 2014; Žižek, 2012). These representations and cultural norms within a society, are neither constructed in a void, nor correspond to an individual voluntaristic elaboration, but are deeply related to material,

relational, and symbolic conditions in which people live and develop (Barker, 2013; Gunvald & Cox, 2013). Seeing the reciprocity and interrelation of the cultural, political, and economic spheres, not as separate elements, but as a specific "historical formation" (Gramsci, 1988), is an essential contribution of Marxist analysis, and allows us to consider that social movements constitute mediated expressions of underlying political and economic conflict, or "mediated expressions of class struggle" (Barker, 2013, p. 47). In this regard, Barker (2013) and Žižek (2012) suggest that cultural struggles, which are a characteristic of most contemporary social movements, constitute a displacement of economic and political struggles, independent of whether social actors involved are aware of this situation or not: "conceptually and historically, 'class struggle' precedes any 'formation' of classes as potential actors, or any necessary 'consciousness' of class" (Barker, 2013, p. 43). Similarly, Žižek (2012) suggests that economic antagonisms, which would determine the existence of class struggle within societies, are *inscribed* in political and cultural conflict, and therefore in collective action:

The 'determining role of economy' thus does not mean that [...] what all the fuss 'was really about' [referring to a cultural conflict] was the economic struggle, with the economic functioning as a hidden meta-Essence 'expressing' itself at a distance twice removed in cultural struggle (the economy determines politics which in turn determines culture...). On the contrary, the economic inscribes itself in the course of the very translation or transposition of the political struggle into the popular-cultural struggle, a transposition that is never direct, but always displaced, asymmetrical. (Žižek, 2012, pp. 26-27).

Similarly, and departing from previous theoretical traditions on social movements, within Marxism, it is necessary to define what Barker (2013) and Gunvald and Cox (2013) refer to as "social movements from above" and "social movements from below". If we understand social movements as collective cultural and political actions oriented to solve a shared demand, there is no reason to think of them as eminently transformative, neither could we consider them mostly as prophetic, using Melucci's term (1985), but these can present within their own constitution reactionary elements, including discrimination, nationalism, and xenophobia (Barker, 2013; Gunvald & Cox, 2013; Houtart, 2006). Moreover, Žižek (2012) points out that too often, social movements that publicly denounce neoliberalism, mainly pushed by impoverished middle classes, are in fact fighting against their own proletarianisation and for the maintenance of their own class privileges. In other words, there is no guarantee that a social movement is necessarily transformative nor progressive (Barker, 2013; Gunvald & Cox, 2013; Houtart, 2006). This also relates to the aforementioned idea of social movements as mediated expressions of economic and social conflict, and it is possible to consider social institutions as

the provisional result of different interests in opposition, or as the contingent "sediment" of the struggle between social movements from above and social movements from below (Gunvald & Cox, 2013, p. 66)

In relation to social movements from below, Gunvald and Cox (2013) point out to the importance of shared representations of the world among participants within these social movements. They refer to these as "local rationalities" (Gunvald & Cox, 2013, p. 66), highlighting that these do not correspond to prevailing, or hegemonic, common sense representations within society, but constitute alternative narratives of shared demands, which can be more or less articulated and coherent. When these local rationalities are further articulated, they could lead to the strengthening of a collective identity, the identification of an antagonist social group, and the possibility of confrontation (Gunvald & Cox, 2013). This dialogical process, which these authors refer to as "militant particularism" (Gunvald & Cox, 2013, p. 74) is intimately related to "everyday practices developed in response to specific needs, problems and places, materially grounded in concrete situations, and hence a specific group" (p. 66). This process of articulation can in turn connect with broader collective problems and other social groups, in what is known as "campaigns" (Gunvald & Cox, 2013, p. 76). The main characteristic of this broader process, which may never happen in a certain locale, is the development of a common narrative of shared problems (Gunvald & Cox, 2013). This gives participants a deeper understanding of the links between what may seem as disparately different claims, in a gradual pedagogical process, with increasing degrees of abstraction. These shared grievances, which are materially grounded in concrete situations, constitute those visible expressions of non-observable structures and social relations that are at the bottom of these problems (Cox & Gunvald, 2014; Gunvald & Cox, 2013).

According to a Marxist approach to social movements and collective action, these non-observable structures and social relations correspond, in contemporary societies, to the consolidation of neoliberalism, as the most advanced phase of capitalism (Harvey, 2004; Meiksins, 1995; Žižek, 2012). Neoliberal societies are characterised by a general process of capital accumulation by dispossession (Harvey, 2004; Meiksins, 2006). This process refers, broadly speaking, to the extension of capitalism and commodification of human life in aspects previously protected from markets, such as health care, education, and sexuality (Harvey, 2004; Meiksins, 1995). It also includes the intensive exploitation of natural resources with significant social and environmental negative externalities (Harvey, 2004), what Svampa (2012) refers to as neo-extractivism, as discussed above. In relation to the preceding, Harvey (2004) retakes the

notion of primitive accumulation of capital, and argues that non-capitalist mechanisms for capital accumulation, such as violent invasions, corruption, and private expropriations, among others, are intrinsic to capitalism and do not correspond to either exceptions or economic irregularities. Another characteristic of neoliberalism is the emergence of immaterial labour, such as intellectual and affective labour, as a central component of globalised economies (Žižek, 2012), a phenomenon correctly observed by Touraine (1985, 1995) and Melucci (1985, 1994).

These structural socioeconomic processes, which Salazar (2012) argues are currently under rapid reconfiguration at a global scale, condition the emergence and development of new social movements in many regions of the globe (Della Porta, 2015; Žižek, 2012). The accelerated commodification of human life and the natural environment has led to the gradual expansion of capitalist relations beyond traditional urban workers and peasants (Houtart, 2006, 2009). Accordingly, it is the expansion of capitalism that underlies the historical transformations of the social basis for protest, the content of demands, and political strategies of new social movements (Barker, 2013; Gunvald & Cox, 2013; Houtart, 2009), and not the increasing autonomy of cultural production over material production, as scholars within the New Social Movement perspective suggested (Melucci, 1985, 1995; Touraine, 1985, 1995). Consistently, many of these contemporary social movements denounce the neoliberal globalisation process and the subsequent exclusion of citizens from decision-making processes within liberal democracies (Barker, 2013; Cox & Gunvald, 2014; Žižek, 2012).

From a different perspective, Žižek (2009) also contributes to the study of social movements and collective action in general, by developing the ideas of subjective and objective violence. According to this author, subjective violence corresponds to the common sense understanding of what is violent, referring to those perturbations that are perceived in relation to a "non-violent zero level" (Žižek, 2009, p. 2). As such, riots, terrorist attacks, crimes, and wars, among many other, correspond to this type of subjective violence. However, Žižek (2009) argues that there is another form of objective violence, which corresponds to the violence that is inherent to what we perceive as the normal functioning of society (Žižek, 2009). Because this type of violence is so proximate, it usually remains invisible. Žižek (2009) proposes that objective violence encompasses two different types of violence: symbolic, and systemic violence. Symbolic violence refers to the relations of oppression enacted through discourses and other social practices, while systemic violence refers to the "often catastrophic consequences of the smooth functioning of our economic and political systems" (Žižek, 2009, p. 2). Accordingly, within contemporary societies, the predominant mode of politics is post-political politics, as

the "politics which claims to leave behind old ideological struggles and instead focus on expert management and administration" (Žižek, 2009, p. 40). In other words, it corresponds to a depoliticised administration of the zero level of society. The importance of this conceptualisation of violence and depolitisation will be of utmost importance for the discussion of this thesis.

Chapter 3: Research context

In this chapter, I provide the contextual narrative that I consider is pertinent to my subject of research, i.e., collective participation in health and social movements in Huasco, Northern Chile. In the first section, I describe the development of government policies for collective participation within health care services during the periods of transition to, and consolidation of democratic capitalism in Chile. Particularly, I focus on those policies that recognise participation in health as the right of people to participate in public administration, and as a strategy for health promotion, particularly within primary health care. Subsequently, I provide a revision of existing empirical research on participation in health in Chile during these periods. Despite the rhetorical emphasis and the enforcement of legal regulations that guarantee minimum conditions for participation within health centres, there is little research on this subject. The few existing studies on participation in health in the country comprise the period from mid-1990 to mid-2000, and most of them are conducted in Santiago de Chile. In the second section of this chapter, I describe the territory of Huasco, in Atacama region, where this research situates. Specifically, I address its main socioeconomic characteristics, emphasising the economic transformations occurred during the last three decades in the territory, and the related environmental and epidemiological contexts that provide the objective conditions where collective participation in health occurs. In the third section, I revisit the research questions posed in Chapter 1, that will justify the research methodology and research design.

Community participation in health in Chile

In Chile, collective participation in health has been one of the central elements in the design and implementation of health policies by successive governments during the periods of transition to, and consolidation of democratic capitalism (Ministerio de Salud, 1994, 2008b, 2013b; Salinas, 1996). Collective participation in health, as a discursive and programmatic mainstay, has been transversal, both for the centre left *Concertación de Partidos por la Democracia*, and centre right *Alianza por Chile* governments, although with different emphasis and definitions of how to understand participation and citizen involvement within public administration in general (Anigstein, 2008; Donoso, 2009a; Méndez & Vanegas, 2010). During the first years of democratic transition in the 1990s, and after the civil and military dictatorship that ravaged Chilean society from September 1973 to March 1990, collective participation in

health was promoted within the broader narrative of democratic reconstruction of Chilean society (Anigstein, 2008; Donoso, 2009a; Ministerio de Salud, 1994). Collective participation in health was also one of the principles of the national primary health care strategy, together with the principles of decentralisation and equity, oriented towards the rebuilding of health infrastructure, the expansion of health care coverage, especially to the most socioeconomically disadvantaged communities, and the improvement of the efficiency of primary health care services (Donoso, 2009a; Ministerio de Salud, 1994; Salinas, 1996).

During the mid-1990s, the health care sector attempted to recover the experiences of collective participation in health initiated in the 1960s, promoting the creation and revitalisation of local health councils, which were abruptly suppressed during the civil and military dictatorship (Ministerio de Salud, 1994; Salinas, 1996). Local health councils correspond to spaces for consultative and non-binding community participation that advise every primary health care centre administration in the country (Ministerio de Salud, 2008b; Salinas, 1996). These participatory spaces include communities' representatives and local health workers, and aim to strengthen community participation in decision making within the health care sector, and to promote co-responsibility of communities regarding their health situation (Ministerio de Salud, 2013b; Salinas, 1996). Additionally, during this period, centre left government coalition Concertación enhanced participation of existing community groups through the implementation of the Salud con la Gente programme (Health with the People), providing economic resources, on a competitive basis, to those grassroots organisations working in health topics, and in coordination with primary health care workers (Gideon, 2002; Salinas, 1996; Salinas & Vio, 2002). Also, during the early 1990s, health authorities developed the first efforts to train health workers in community and participative work (Ministerio de Salud, 1994, 2008b; Salinas, 1996).

The gradual implementation of the family and community health care model initiated in the late 1990s, and within the broader context of the Chilean health reform, resituated collective participation in health as a strategy for deepening democracy, and for enhancing efficiency and sustainability of health programmes as part of a process of state modernization (Anigstein, 2008; Gideon, 2002; Ministerio de Salud, 2008b). The sectorisation of territories and the creation of family health teams in every family health care centre in Chile opened new spaces and responsibilities for collective participation in health, including the formulation of participatory health assessments, and the involvement of local communities in the annual programming of primary health care centres (Gideon, 2002; Ministerio de Salud, 2008b, 2013b). In this regard, national health authorities defined collective participation in health as "the most sensitive

instance to identify health necessities not previously addressed" by health workers and government authorities (Ministerio de Salud, 2008b, p. 65). In this period, the first experiences of participatory budgets within health services and municipalities were documented (Cancino & Pozo, 2010; Donoso, 2009b; Ríos & Wolff, 2009). Participatory budgets, unlike local health councils, are deliberative and binding collective processes where communities allocate a small proportion of the health budget to what they perceive are their most pressing health problems (Cancino & Pozo, 2010; Montecinos, 2011; Ríos & Wolff, 2009).

In the early 2000s, and prompted by the high prevalence of non-communicable diseases, and the accelerated ageing process that the country experienced during the last three decades, national health authorities established the National Health Promotion Plan, and the constitution of Vida Chile National Council for Health Promotion, an intersectoral governmental organisation responsible for the formulation of health promotion strategies (Salinas, Cancino, Pezoa, Salamanca, & Soto, 2007; Salinas & Vio, 2002). According to the National Health Promotion Plan, "health promotion is a process in which individuals and communities acquire the ability to exert control over those factors that determine their health, in order to improve it" (Salinas et al., 2007, p. 137). Consistently, one of the objectives of the National Health Promotion Plan was the promotion of psychosocial protective factors, including the establishment of supportive networks among local communities, together with the objectives of tackling the increasing prevalence of obesity, physical inactivity, and tobacco consumption (Salinas & Vio, 2002). For this purpose, one of the strategies was the implementation of annual health promotion plans in every municipality, in which community participation was one of its main components (Salinas et al., 2007). In 2006, Vida Chile National Council for Health Promotion was discontinued, but the implementation of annual health promotion plans within local governments remained (Salinas et al., 2007).

In addition, since 2008 the Ministry of Health promotes citizen participation at the primary health care level through Law 19,813 that provides benefits to primary health care (Ministerio de Salud, 2007a). According to this legal regulation, collective participation within primary health care centres, together with other preventive and curative health activities, constitute what is known as health-related goals for primary health care, as shown in Table 1. These activities, and the minimum conditions for their accomplishment, are negotiated each year between regional health authorities and municipal health workers, and their overall fulfilment is associated with an economic incentive for primary health care workers which corresponds to approximately 12 per cent of their base remuneration (Ministerio de Salud, 2007a). In 2008,

the health-related goal associated to collective participation in health corresponded to the implementation of a local health council in every health centre (Ministerio de Salud, 2007b). From 2009 to 2015, the health-related goal was to maintain local health councils working regularly on at least two health topics previously defined by health authorities, including one of 80 explicit guarantees in health care (GES, in Spanish), and another one suggested from a predefined list (Ministerio de Salud, 2014). Since 2016, the health-related goal associated to collective participation in health within primary health care centres is the design and implementation of a local participatory plan within the health centre (Ministerio de Salud, 2015d).

Table 1: Health-related goals for primary health care in Chile, 2017

Health-related goals	National goal
1. Psychomotor development recovery among children (12 to 23 months)	90 per cent
2. Pap smear coverage among women (25 to 64 years)	80 per cent
3a. Dentistry discharge among teens (12 years)	74 per cent
3b. Dentistry discharge among pregnant women	68 per cent
3c. Dentistry discharge among children (6 years)	79 per cent
4a. Effective treatment coverage among people with diabetes (above 15 years)	29 per cent
4b. Annual evaluation of diabetic foot among people with diabetes (above 15 years)	90 per cent
5. Effective treatment coverage among people with hypertension (above 15 years)	54 per cent
6. Exclusive breastfeeding among children (6 months)	60 per cent
7. Social participation plan	100 per cent

Note. Adapted from Exempt Resolution IIII, that approves health goals for improving primary health care for the year 2017, by *Ministerio de Salud* (2016b).

In 2011, during the first government of the centre right coalition *Alianza*, and amid a rapid process of expansion and consolidation of participatory experiences in the country, Law 20,500 about citizen participation in public administration was approved (Ministerio Secretaría General de Gobierno, 2011). It was preceded by the Citizen Participation Agenda for 2006 – 2010 (Ministerio Secretaría General de Gobierno, 2008). Law 20,500 about citizen participation later led to the Ministry of Health Exempt Resolution 31 of 2015, that approved the general regulation of citizen participation in the public health sector, providing the current legal

framework that sustains collective participation within public health institutions (Ministerio de Salud, 2015c). In this normative body, participation in health is defined as "the capacity of citizens to contribute to decisions in the design, implementation, and evaluation of health programmes related to rehabilitation, prevention, and health promotion, and in those decisions related to the use and investment of public resources" (Ministerio de Salud, 2015c, p. 1). According to this document, collective participation constitutes a collaborative and horizontal process for assessing health needs, and a dialogue between local communities and health workers. Participation in health includes facilitated access to public information, participatory public annual accounts, strengthening of existing spaces for participation such as local health councils, and the implementation of new spaces for citizen involvement at the local, regional, and national level (Ministerio de Salud, 2015c).

In this period, community participation in health was also incorporated to the National Health Strategy Plan for 2011-2020, as part of the broader strategic objective of strengthening the Chilean health sector (Ministerio de Salud, 2011). Participation in health was conceptualised within the broader notion of governance in health, as "those initiatives that promote the strengthening of social participation, considering the importance of including citizenship and health users to the processes of definition and implementation of health policies, in order to improve their pertinence and efficiency" (Ministerio de Salud, 2011, p. 282). In particular, this strategic objective included the expansion of spaces for citizen participation within regional and national health institutions, such as Regional Secretaries of the Ministry of Health and Regional Health Services; the promotion of participatory health budgets in every regional health service; the broadening of the electoral basis for the functioning of local health councils; and the promotion of community interventions for supporting individuals and families with chronic conditions in the context of primary health care services (Ministerio de Salud, 2011). In addition, the National Health Promotion Strategy, through the Elijo Vivir Sano programme (I chose to live healthy) was reoriented towards the modification of individual risk factors. Accordingly, community participation in health focused on "the creation of healthy lifestyles through the dissemination of health information and discussion of local public policies for their empowerment" (Ministerio de Salud, 2011, p. 119).

More recently, since 2016 and following recommendations from the World Health Organization, the National Health Promotion Plan was again reoriented towards the implementation of the Healthy Cities, Municipalities, and Communities strategy (Ministerio de Salud, 2015b). Within this programme, health authorities recognize local governments and

community organisations as essential actors for health promotion, and define healthy cities and municipalities as those territories where there are formal intersectoral commitments for improving quality of life and wellbeing of communities (Ministerio de Salud, 2015b). Community participation is focused on the development and strengthening of social capital and community empowerment to increase people's control over social determinants of health (Ministerio de Salud, 2015b, 2016a). Methodologically, the Healthy Cities, Municipalities, and Communities strategy requires that municipalities, local communities, and other territorial actors design an intersectoral, three-year, health promotion plan centred on healthy food, physical activity, and strengthening of community participation (Ministerio de Salud, 2015b, 2016a). The later includes proposals such as community training for health promotion, and the creation of an education programme for community leaders on citizen participation, and the exercise of health care rights, among others (Ministerio de Salud, 2015b, 2016a).

Evaluation of experiences of participation in health in Chile

Although the relevance of collective participation in health both, for deepening democracy within public health institutions, and as a central strategy for health promotion, in Chile there is little empirical research into this subject (Anigstein, 2008; Donoso, 2009a; Méndez & Vanegas, 2010). For the purpose of assessing these experiences, I conducted a revision of the literature on community participation in health in Chile including published peer reviewed articles and books in English and Spanish from 1990 to 2017. After an initial revision of 18 articles, five unique studies were identified, documented by seven peer reviewed articles (Bolados, 2007, 2009; Gideon, 2001, 2005; Greaves, 2004, 2005, 2007), one book (Paley, 2001), and one book chapter (Gideon, 2002). Four of these studies focused on institutional spaces for participation conducted among low income municipal health care centres in Santiago de Chile (Gideon, 2001, 2002, 2005; Greaves, 2004, 2005, 2007; Paley, 2001), with the exception of Bolados' (2007, 2009) ethnographic research on San Pedro de Atacama, Northern Chile. These studies are dated from the mid-1990s to mid-2000s. While the disciplines and methodologies of these investigations differ to some extent, these studies coincide in pointing to the merely formal and instrumental character of participation (Gideon, 2002, 2005; Greaves, 2005, 2007). They also highlight some of the tensions underlying different perspectives of participation between political authorities, health workers, and grassroots organisations (Bolados, 2007, 2009; Paley, 2001).

The first of these studies corresponds to Paley's ethnographic research (2001) on Llareta community health group in La Bandera, a shantytown in Southern Santiago, in the mid-1990s. In her investigation, Paley (2001) refers to the paradox of participation in Chile, as the gradual demobilisation and political apathy of grassroots organisations during the period of transition to democratic capitalism, contrasting to the massive social mobilisations and political activism during the earlier authoritarian regime (Paley, 2001). In this regard, Paley (2001) proposes the concept of "marketing democracy" for emphasising both, the impact of neoliberalism on the idea of democracy, and government's promotion of democracy as a fundamental ideological element for national unity, demobilisation, and political stability (Paley, 2001). In her words, she suggests that democracy came to be a "symbolic substitute for economic redistribution" in a context of profound social and economic inequalities (Paley, 2001, p. 130). Within the health sector, she also emphasises the differences in the prevailing understandings of participation and democracy between social movements and health workers (Paley, 2001). For members of Llareta community health group, participation in health mainly revolved around the ideas of political inclusion, to have a voice in decision-making, and to the expansion of health services to most vulnerable communities in Chile (Paley, 2001). In contrast, for most of health workers and political authorities included in her research, participation and democracy related to the notions of political stability, self-help, and avoidance of social conflict (Paley, 2001).

Consequently, Paley (2001) notices how community participation in health was enacted within health care services mainly restricted to self-help mechanisms, to the extension of municipal health care services through unpaid labour, and to the instrumentalisation of local communities for applying for external resources (Paley, 2001). She exemplifies her conclusions drawing on her observations of communities' meningitis and cholera campaigns in the early 1990s, and the cleaning of a garbage dump in the territory (Paley, 2001). She describes how local communities requested from national health authorities, in the early 1990s, an emergency plan for addressing a meningitis outbreak in their neighbourhood that caused the death of many children. Due to the negative response of health authorities, arguing the limited extension of the outbreak, and the lack of funding for health programmes, some grassroots organisations threatened government authorities with a massive mobilisation (Paley, 2001). Immediately, health authorities deemed the potential of a large-scale mobilisation as a threat to political stability, and therefore blamed health groups such as Llareta, that they were compromising the process of democratic transition (Paley, 2001). A member of the *Llareta* community health group questioned then, if national health authorities were suggesting that some children should die in the name of democracy? (Paley, 2001).

Paley (2001) also highlights the idea of the appropriation of scientific discourses among *Llareta* community health group, and the frequent disregard by political authorities and health workers of communities' knowledge, considering the lack of professional qualifications among their members. She describes how members of *Llareta* health group utilised quantitative health information, systematised in tables and graphics, for acquiring legitimacy among local health workers and peers (Paley, 2001). Additionally, Paley (2001) argues how grassroots organisations, such as *Llareta* health group, often challenged health workers' narrow and essentially biomedical understanding of health and health care, attempting to expand their comprehension of individual health problems toward broader issues such as socioeconomic inequalities, environmental pollution, and democracy (Paley, 2001). For this purpose, *Llareta* health group organised seminars with local communities, sustained meetings with national health authorities, and disseminated health information through posters and leaflets within their neighbourhood in Southern Santiago de Chile (Paley, 2001).

In the late 1990s, Gideon (2001, 2002, 2005) researched another community health group, Comité de Salud de El Bosque, in Southern Santiago de Chile. She conducted her research in a context of progressive decentralization of primary health care services, and during the period of the implementation of the Chilean health reform (Gideon, 2002, 2005). In the first phase of her investigation, she focused on the interactions between community members and health workers during the first years of implementation of the family and community health care model, as part of the Salud con la Gente programme, as mentioned above (Gideon, 2001, 2002). Gideon (2001, 2002) describes how local health workers and political authorities defined collective participation in health eminently from a narrow and technical perspective. After interviewing some government authorities responsible for the implementation of participatory spaces within health institutions, she acknowledges the distance between the rhetoric of participation and its practical implementation (Gideon, 2002, 2005). In this regard, she proposes that in general, existing spaces for participation did not allow local communities to be involved in decision-making processes (Gideon, 2002, 2005). She argues that "participation was 'added on' to the Chilean model as a self-help mechanism to alleviate shortfalls in the public [health] system, rather than being present from the start as a goal of political inclusion" (Gideon, 2002, p. 200).

She also suggests that health workers inside primary health care centres in Southern Santiago saw collective participation as an eminently biomedical activity, aimed at replacing some state responsibilities by communities' unpaid labour, affecting mostly poor women (Gideon, 2002).

These activities included the organisation of health prevention campaigns, and dissemination of health information (Gideon, 2002). According to this author, this common conceptualisation of community participation among health workers is coherent with the broader neoliberal reforms initiated in the country in the early 1980s, including the gradual decline in public health services, and the expansion of the private health sector (Gideon, 2001, 2002). In line with this, Gideon (2001, 2002) also emphasises the lack of material and financial resources within primary health care services, and the consequent work overload among health workers. She also suggests that collective participation in health, from the community perspective, entails taking responsibilities which are essentially biomedical, and focused on individual health problems (Gideon, 2001, 2002). In addition, those community health organisations that had more radical and politicised aims, had to modify, to a certain extent, their objectives in order to comply with the government agenda for receiving public funds, as in the case of the *Salud con la Gente* programme (Gideon, 2002).

In the second phase of her research, Gideon (2005) focuses on the participation of the organisation Comité de Salud de El Bosque, among many other grassroots organisations, in the ad hoc spaces for citizen involvement created in the early 2000s, for the design and implementation of the Chilean health reform (Gideon, 2005). These spaces consisted of shortterm working groups, involving academics, representatives of private health insurance companies, community organisations, and health workers' unions, in order to express their opinion about the Chilean health reform (Gideon, 2005). Regarding these working groups, many of the participants from grassroots organisations and health workers' unions argued that their discussions were not taken into consideration in the final documents, perceiving that community participation was merely symbolic, an "appearance of consultation", while the real decisions were taken elsewhere, as it was confirmed later in her research (Gideon, 2005, p. 175). Participants of grassroots organisations also denounced government authorities' lack of consideration for the time allocated to participatory processes (Gideon, 2005). Government representatives submitted official documents to participants with insufficient time for their analysis, and at the same time, distracted community organisations and health workers from other work they needed to perform (Gideon, 2005). Due to the aforementioned problems, many participants expressed their frustration, mistrust, confusion, and the feeling of being manipulated by political authorities, leading them to reconsider their participation in further government participatory spaces (Gideon, 2005).

Greaves' research on municipal spaces for participation in the districts of Huechuraba, Northern Santiago (Greaves, 2004) and La Cisterna, San Miguel, and La Granja, Southern Santiago (Greaves, 2005, 2007), also provides a critical perspective on the dynamics of participation between municipal workers and community organisations. Despite being promoted as spaces for deliberation and empowerment, Greaves suggests that collective participation inside municipalities, where primary health care is implemented, often ended as an "instrument for the application of the techniques of 'discipline' to the arena of citizenship" (Greaves, 2004, p. 204). In this regard, spaces for intersectoral participation inside municipalities frequently functioned as containment barriers, isolating central government from social demands, and disarticulating broader social movements (Greaves, 2004, 2005, 2007). Greaves suggests that there are four aspects that inhibit a more meaningful involvement of citizenship in local municipalities in Chile: a) the maintenance of authoritarian enclaves within democratic institutions, b) the detachment of traditional political parties from grassroots communities and social movements' demands, c) the eminently consultative, and explicitly non-binding character of municipal participatory spaces, and d) the different perspectives about participation and democracy between political authorities, municipal workers and local communities (Greaves, 2004).

With that said, municipal workers conceptualised collective participation as a mechanism for educating citizens on how to participate within neoliberal institutions (Greaves, 2004, 2007). One of the political authorities responsible for participation at that moment, clearly stated this position when claiming that participation involved "adjusting the role of social movements and other associations to the neoliberal social and economic changes that have taken place over the last two decades" (Greaves, 2007, p. 311). Political authorities presented participation as a depoliticised and non-confrontational practice, territorially fragmented, and disarticulated from any broader narrative of social rights or structural transformations (Greaves, 2004, 2005, 2007). Particularly within the health sector, Greaves (2004) describes how a participatory health assessment within the municipality of Huechuraba was restricted to local health problems, isolated from external political and economic circumstances. These spaces were moderated by municipal social workers, who insisted that local communities should propose realistic and effective solutions to identified problems, avoiding political talk and conflicting issues, and remembering the lack of financial resources within primary health care centres (Greaves, 2004).

More recently, Bolados (2009) researched collective participation in health in San Pedro de Atacama, Northern Chile focusing mainly on experiences of intercultural health by *Atacameños*

indigenous groups, particularly inside the local health council of rural health centre of San Pedro de Atacama. In her research, and from the perspective of local communities, Bolados addresses the conflictive relationship between health workers and community participants. For this purpose, the author divides the process into three different phases. During the first phase, and since its creation in 2006, local health council was characterised by the imposition from health workers to local communities of what everyone should consider as collective participation in health (Bolados, 2009). Health workers defined participation within the local health council as the fundamental strategy for the development and strengthening of social capital among local communities, and as an advisory body for the primary health care centre (Bolados, 2007, 2009). Bolados argues that this imposition both ignored previous community experiences of organisation and mobilisation for the protection of their health, and delegitimized community leaders because of the formal demand that the president of the local health council must be the director of the health centre (Bolados, 2007, 2009). During this period, which Bolados refers to as "rayando la cancha" (colloquial for establishment of the rules), not only the definition of the role of the local health council, but also the concept of intercultural health, was subordinated to official narratives about democracy, participation, and health care (Bolados, 2009, p. 97).

According to Bolados, there were some moments in this first phase of the local health council where participation became a way for instrumentalising local communities (Bolados, 2007, 2009). To exemplify this, she describes how the director of the health centre utilised community organisations in order to obtain external funds for health projects according to health workers' needs, without taking into consideration either interests or necessities of members of the local health council (Bolados, 2009). She goes on to describe how in one meeting with the local health council, health workers requested their approval to apply for funds for improving health infrastructure, not mediating any prior consultation with the organisation (Bolados, 2009). According to Bolados, "participation constituted a functional instrument for the priorities of the health workers, and not for those of the local health council" (2009, p. 99). In another example, the director of the health centre requested the participation of a small number of members of the local health council for the preparation and revision of the annual public account, on a very short notice, and offering only five minutes for the community's account (Bolados, 2009).

In the second phase of the functioning of the local health council, and after critiques that emerged from local communities because of the way health workers imposed participation, members of the organisation developed strategies for resistance, framing their health demands within a broader political context that acknowledged power imbalances and emphasised intercultural knowledge (Bolados, 2007, 2009). Participants of the local health council elected a new democratic board, they proposed demands such as their own management, and they even appropriated material spaces inside the health centre (Bolados, 2009). However, in the third phase of participation, which Bolados describes as "state amnesia" (2009, p. 100), both regional health authorities and local health workers, ignored previous agreements with the local health council, and aggressively reclaimed this participatory space. They used strategies of making invisible and disregarding local health council's trajectory by delivering a new presentation about what local communities should understand as participation (Bolados, 2009). Furthermore, regional health authorities described the previous experience with the local health council as immature, and therefore it was necessary to include new processes aiming to deepen democracy, such as the election of a new directive (Bolados, 2009). Soon, communities and local leaders expressed their exhaustion and mistrust towards government authorities and spaces for citizen participation in general, resulting in their gradual demobilization (Bolados, 2007, 2009).

Considering the preceding, the author suggests that "in those cases where empowerment, participation, and the active exercise of citizenship exceed permissible limits, these attributions rapidly experience re-formulations and re-configurations from bureaucracy and public services" (Bolados, 2009, p. 103). Bolados (2009) argues that participation, as it is defined and implemented within these spaces, constitutes as a mechanism for depoliticizing local communities, for promoting government control over grassroots organisations, and for facilitating government intervention over indigenous territories (Bolados, 2007, 2009). She also concludes that political authorities and health workers mainly conceive community participation in health as the mere organisation of meetings and elections among local communities, and that for this purpose, these communities require the assistance of external health workers and other professionals (Bolados, 2007, 2009). In turn, and despite the official rhetoric of participation, only few health workers were involved in these spaces for participation within health centres in San Pedro de Atacama (Bolados, 2007, 2009).

The revision of empirical research on community participation in health in Chile contrasts to official narratives and policies that suggest that participation deepens democracy and promotes empowerment of local communities. Researchers on the subject agree in describing collective participation within health centres in Chile as merely formal and instrumental, referring to it as

a mechanism for self-help of local communities in a context of neoliberal transformations (Gideon, 2002, 2005; Paley, 2001), and as a resource for health workers to apply for external fund schemes, often subordinated to the requirements of the health centre (Bolados, 2009; Gideon, 2002; Greaves, 2004). Scholars also coincide in the depoliticised character of participation within health centres in Chile. Participation in health is fragmented into isolated and short-term projects that do not articulate with broader narratives addressing socioeconomic conditions that affect people's health (Greaves, 2005, 2007; Paley, 2001). Similarly, health workers and most community members within these participatory spaces tend to avoid political talk and conflict (Bolados, 2007; Greaves, 2004, 2007; Paley, 2001). Lastly, community participation in health is also described as a mechanism for government control and discipline over grassroots communities that express different narratives of health, participation, and democracy (Bolados, 2009; Greaves, 2004, 2005; Paley, 2001). In this regard, those organisations that manifest a more politicised understanding of participation, frequently end up exhausted and demobilised.

Further research in the gap between normative assumptions and empirical research findings of community participation in health centres in Chile is of importance for many reasons. First, because of the gradual extension of spaces for citizen participation, backed up by legal regulations, it is required to observe and critically assess the potential negative impact for local communities which are involved in these spaces. Second, because published research on community participation in health in Chile does not include the period after the implementation of main legal regulations on the subject, initiated in 2008 with the inclusion of participation as a health-related goal among primary health care centres (Ministerio de Salud, 2007a), which require an assessment of their impact on health workers and local communities. Similarly, published investigations do not include an evaluation of the successive national health promotion strategies, mainly referred to the Health Cities, Municipalities, and Community strategy (Ministerio de Salud, 2015b), and their impact on community participation in health. Third, because previous research does not comprise the period after 2011, referred to as the "awakening of society" (Garcés, 2012), which is characterised by the gradual delegitimation of traditional political institutions and formal spaces for participation in Chile, and the emergence of massive social mobilisations in different regions in the country (Garcés, 2012; Salazar, 2012). Fourth, it is necessary to assess institutional spaces for participation outside Santiago de Chile, and therefore to examine how participation is enacted in more marginal geographical settings.

Valle del Huasco, Northern Chile

Valle del Huasco is the territory situated in Atacama region, Northern Chile, which corresponds to the area of influence of river Huasco and its tributaries, approximately coinciding with the administrative and political division of Huasco province, from where the latter takes its name. Valle del Huasco includes the village of Alto del Carmen in the Andes Mountains, situated in the intersection of rivers El Tránsito and El Carmen, main tributaries of river Huasco. It also includes the cities of Vallenar, Freirina, and Huasco, the latter situated at the mouth of river Huasco on the coast of Atacama region, as shown in Figure 2. The estimated population of Valle del Huasco in 2017 was 77,737 inhabitants, 70 per cent of them were concentrated in the district of Vallenar (Instituto Nacional de Estadísticas, 2015). Mining and electricity generation are the most important economic activities in Valle del Huasco, according to their relative specialisation index, together employing 16.1 per cent of provincial labour force (Ministerio de Desarrollo Social, 2015). Fishing, agriculture, and livestock, traditional economic activities in the territory, employ 9.3 per cent of provincial labour force (Ministerio de Desarrollo Social, 2015).

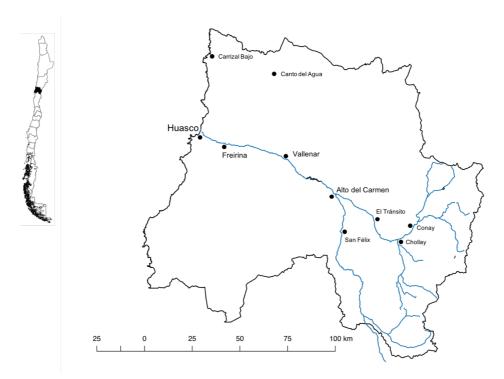


Figure 2: Map of the province of Huasco, including Huasco River and its tributaries El Tránsito and El Carmen. Prepared by the author based on geographical information retrieved from *Biblioteca del Congreso Nacional de Chile* (2018), and *Ministerio de Bienes Nacionales* (2018).

The district of Huasco had an estimated population in 2017 of 10,595 inhabitants, and it is the second most populated district in the province of Huasco, and the largest port in Atacama region (Instituto Nacional de Estadísticas, 2015). The district of Huasco includes the city of Huasco, and the rural localities of Huasco Bajo, Carrizal Bajo, and Canto del Agua. In this territory, distant by approximately 700 km north from Santiago de Chile, the most important economic activity, according to its relative specialisation index and number of labour force employed is electricity generation, employing 13.6 per cent of local labour force (Ministerio de Desarrollo Social, 2015). This activity concentrates in Guacolda thermoelectric power plant, property of AES Gener, with five units and a raw generation capacity of 760 MW, and Huasco thermoelectric power plant, property of ENDESA, with three units and a raw generation capacity of 58 MW (Comisión Nacional de Energía, 2018). In February 2013, the Council of Ministries approved Punta Alcalde thermoelectric power plant project, which consisted of two units with an estimated raw generation capacity of 740 MW and a waste disposal site (Comité de Ministros, 2013). It would provide around 2,200 jobs during its construction phase, and 39 job positions during its operations, for an estimated life span of 30 years (Empresa Nacional de Electricidad, 2009).

Mining constitutes the second most important economic activity in the district of Huasco, according to its relative specialisation index, employing 7.2 per cent of local labour force (Ministerio de Desarrollo Social, 2015). Especially important is the iron mining industry, which includes the mining deposits of *Los Colorados* and *Algarrobo*, and the iron pelletizer plant in Huasco, property of CAP Minería (Elgueta, 2013; Sociedad Nacional de Minería, 2018). In May 2015, the Regional Commission for Environmental Evaluation approved *Cerro Blanco* project, property of White Mountain, whose facilities located in the administrative limits of Huasco and Freirina districts will be used for the extraction and processing of rutile, a titanium ore (Comisión de Evaluación Ambiental de Atacama, 2015). It is expected that during its construction phase it would provide around 765 jobs, and during its active period it would provide around 510 jobs, during an estimated life span of 24 years (Comisión de Evaluación Ambiental de Atacama, 2015). At the provincial level, there are the extensive gold, silver, and copper deposits of *El Morro* and *Relincho*, property of Goldcorp, and *Pascua Lama*, property of Barrick, located in the Andes Mountains, and administratively situated in the district of Alto del Carmen (Sociedad Nacional de Minería, 2018).

Fishing corresponds to the third most important economic activity in the district of Huasco, providing jobs for 6.8 per cent of active population, and constituting one of the traditional

economic activities in the territory together with agriculture and livestock (Ministerio de Desarrollo Social, 2015). These last two, however, have a low relative specialisation index, employing only 2.5 per cent of local labour force (Ministerio de Desarrollo Social, 2015), mainly in production of olive trees, and goat rearing (Instituto Nacional de Estadísticas, 2007). The economic importance of fishing, agriculture, and livestock have significantly decreased in the district of Huasco during the last 30 years, considering both their relative specialisation index, and their contribution to local employment (Ministerio de Desarrollo Social, 2018). When in the mid-1990s these traditional activities employed around 80 per cent of local labour force, in 2015, these activities employed less than 10 per cent of labour force in the territory (Ministerio de Desarrollo Social, 2018). Conversely, economic activities of electricity generation and mining show a sustained increase in the same period, both in terms of their relative specialisation index, and contribution to local employment, as shown in Figure 3 (Ministerio de Desarrollo Social, 2018).

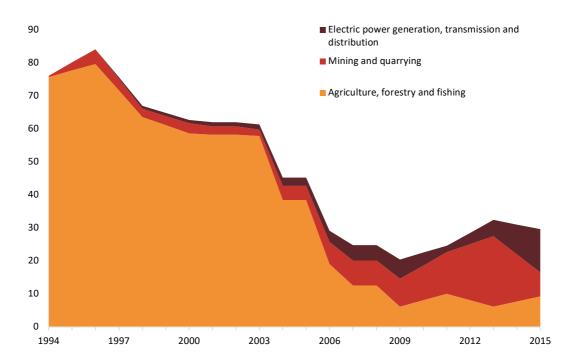


Figure 3: Percentage of economically active population according to selected economic activities in the district of Huasco, from 1994 to 2015. Prepared by the author based on information retrieved from the series of Socioeconomic National Surveys from *Ministerio de Desarrollo Social* (2018).

Nowadays, the district of Huasco has a high percentage of non-qualified workers, corresponding to 29.3 per cent of total labour force, while in the whole country and Huasco province, non-qualified workers correspond to 20.4 and 19.7 per cent of total labour force,

respectively (Ministerio de Desarrollo Social, 2015). Regarding the precariousness of the labour force in Huasco, 31.9 per cent of local workers do not have social security nor contribute to pensions plans. Also, 30 per cent of local workers have temporary contracts – including fixed term, temporary, and eventual contracts – while in the country and Huasco province these types of contracts correspond to 21.2 and 24.8 per cent, respectively (Ministerio de Desarrollo Social, 2015). A high proportion of workers are outsourced, corresponding to 25 per cent of total labour force, while national and provincial outsourcing of labour force correspond to 8.1 and 19.8 per cent, respectively (Ministerio de Desarrollo Social, 2015). Unemployment at the province level, according to the monthly National Employment Survey that includes Vallenar, the capital city of the province of Huasco, reached an average rate of 9.2 per cent of total labour force in 2017, with high inter-annual variation, and often above national and regional unemployment rates, as it is shown in Figure 4 (Instituto Nacional de Estadísticas, 2018).

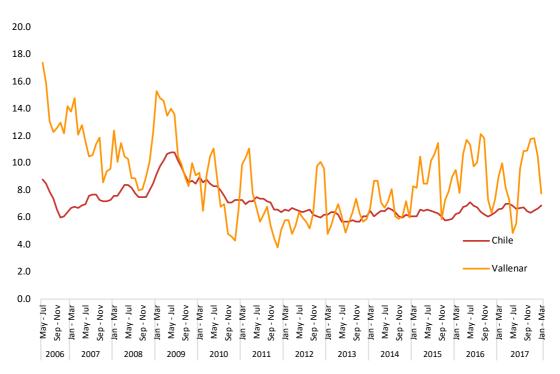


Figure 4: National and provincial quarterly unemployment rates from 2006 to 2017. Prepared by the author based on information retrieved from the series of Employment National Surveys from *Instituto Nacional de Estadísticas* (2018).

Poverty in the district of Huasco, measured according to family income, affects 13.8 per cent of total inhabitants. This number has gradually decreased over the past 30 years, from around 30 per cent of poverty levels in the mid-1990s, a similar trend to the rest of the country and

the province (Ministerio de Desarrollo Social, 2018). However, poverty level in the district of Huasco remains higher than national and provincial poverty levels, attaining 11.6 and 11.4 per cent, respectively (Ministerio de Desarrollo Social, 2015). Moreover, migrant population in the district of Huasco reached 40.4 per cent of total population, corresponding mostly to internal migrants, in contrast to only 18.9 per cent of migrant population in the entire province of Huasco (Ministerio de Desarrollo Social, 2015). Conversely, the indigenous population in the district of Huasco make up 11.4 per cent of its inhabitants which is lower than in the entire province of Huasco where 24.4 per cent of its population belong to indigenous groups, mostly *Diaguitas* and *Changos* (Ministerio de Desarrollo Social, 2015).

Accordingly, the district of Huasco is configured as a territory characterised by intense transformations in its modes of economic and social production during the last 30 years (Maldonado & Ruiz, 2013). On the one hand, there has been a steady decline in traditional economic activities such as fishing, agriculture, and livestock. This reduction can be explained not only because of the mobility of local workers from these sectors to the relatively better job conditions provided by mining and electricity generation industries in the territory, but also because of the adverse consequences these later activities impose over fishing and agriculture production, as it will be discussed in the next section (Elgueta, 2013; Instituto Nacional de Derechos Humanos, 2014; Maldonado & Ruiz, 2013). On the other hand, there are changes in population demographics, fundamentally related with processes of internal migration, and informal labour associated with the consolidation of highly capital-dependent activities, such as mining and electricity generation. The latter is reflected in the high percentage of non-qualified workers, with short-term and seasonal contracts, vulnerable in their access to social security, and high variability in employment rates in the province, as described above.

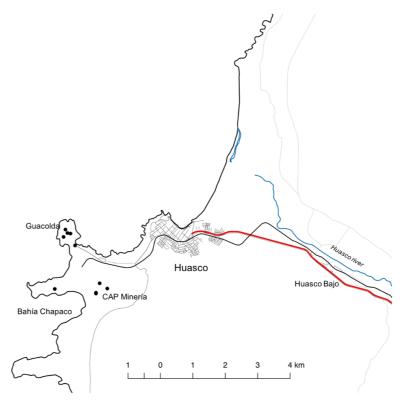


Figure 5: Map of the city of Huasco, including *Guacolda* thermoelectric plant and CAP Minería pelletizer plant. Prepared by the author based on geographical information retrieved from *Biblioteca del Congreso Nacional de Chile* (2018), and *Ministerio de Bienes Nacionales* (2018).

Environmental and epidemiological situation of Huasco

Accelerated transformations in the social and economic organisation in Huasco, associated with the consolidation of mining and electricity generation industries, and the decline of traditional economic activities such as fishing, agriculture, and livestock, also have profound environmental and epidemiological consequences in the territory (Elgueta, 2013). These impacts, increasingly evident after the initial operation of Huasco thermoelectric power plant in 1977 and the iron pelletizer plant in 1978, were denounced by small farmers and fishermen organisations from the districts of Huasco and Freirina during the first years of democratic transition given the political persecution and open authoritarianism of the earlier period (Elgueta, 2013; Maldonado & Ruiz, 2013). It was also in this period when the first investigations which evidenced the negative impacts of the iron mining industry in traditional economic activities and in the health of local population were conducted (Elgueta, 2013; Rozas, 1993).

One of the first environmental studies in Huasco, conducted by the Institute for Research in Agriculture (INIA, in Spanish), and the Chilean Agriculture and Livestock Service (SAG, in Spanish), upon request of small farmers' associations in Huasco, provided ample evidence of the impact of the iron pelletizer plant on local olive production (Elgueta, 2013). Its results showed increased concentration of iron, lead, copper, zinc, and calcium in the olive trees in the territory. There were also signs of damage in olive leaves produced by acid rain that resulted from the emission of sulphur dioxide from the chimney of the iron pelletizer plant in Huasco (Elgueta, 2013; Rozas, 1993). A second investigation in this period, upon request of CAP Minería, estimated annual emissions of at least 3,000 tons of pollutants to the environment from its chimneys, exceeding the then environmental regulation that allowed the emission of a maximum of 50 annual tons (Rozas, 1993). Another study in that period focused on the illegal emission of submarine tailings produced by the iron pelletizer plant in Bahía Chapaco, in the order of 5,000 to 10,000 daily tons, drastically affecting fishing activity (Rozas, 1993). Against this background, olive growers and fishermen filed an application for protection to regional law courts that was approved in June 1992 and later ratified by the appeal court in August of the same year (Elgueta, 2013; Rozas, 1993). This resulted in the drafting of the Exceptional Decree 4 by the Ministry of Agriculture in 1992, establishing secondary air quality standards for sedimentary particulate matter in the river Huasco basin (Ministerio de Agricultura, 1992).

In 1995, the Regional Environmental Commission in Atacama (COREMA, in Spanish) approved the construction of Guacolda thermoelectric power plant and its waste disposal site. Initially, it consisted of two units with a raw generation capacity of 286 MW (Comisión Regional del Medio Ambiente, 1995). Soon after its installation, Guacolda thermoelectric power plant initiated the illegal burning of a mixture of coal and petcoke, the later a product of petroleum refinement and considered a carcinogenic agent by the International Agency for Cancer Research (International Agency for Research on Cancer, 2010). Despite many formal denouncements from local farmers and environmental organisations, and the opposition from the Chilean Medical College, in October 2001, the National Environmental Commission (CONAMA, in Spanish) approved the use of this fuel (Comisión Nacional del Medio Ambiente, 2001). Elgueta (2013) and Maldonado and Ruiz (2013) consider this process dubious since the then general manager of Guacolda thermoelectric plant Jorge Rodríguez Grossi, who had requested the permission to legalize petcoke in July 1999 (Comisión Regional del Medio Ambiente, 1999), was appointed as Minister of Mining in June 2001, during the first presidential term of Michelle Bachelet, and his Ministry was responsible for approving his own previous request (Comisión Nacional del Medio Ambiente, 2001).

In 2005, the Regional Secretary of the Ministry of Health in Atacama requested COREMA to declare Huasco as a saturated area for air pollution, due to the persistent exceeding of annual levels of particulate matter PM10 during the three-year periods of 2002-2004, and 2003-2005, as required by law, as it is shown in Figure 6 (Secretaría Regional Ministerial de Salud de Atacama, 2010a). However, COREMA disregarded this request, and accepted, arbitrarily and outside the law, a memorandum of agreement between the provincial government of Huasco, the Municipality of Huasco (presided by mayor Juan Sabando, a former representative of CAP Minería), and representatives of CAP Minería, *Guacolda* electric industry, and ENDESA (Comisión Nacional del Medio Ambiente, 2010). In this memorandum, local industries committed to fund investigations to determine with exactitude the situation of air quality in the district of Huasco, and to attain permissible annual levels of particulate matter PM10 within two years, with the aim of "protecting people's health and current economic activities in the territory, and to allow for new investment projects" (Comisión Nacional del Medio Ambiente, 2010, p. 5).

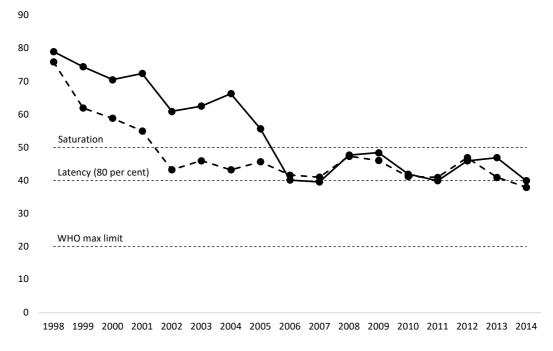


Figure 6: PM10 annual averages in two monitoring stations in the city of Huasco, from 1998 to 2015. WHO: World Health Organization. Prepared by the author based on information retrieved from *Guacolda Energía* (2013) for the period 1998 – 2001, Comisión Nacional del Medio Ambiente (2010) for the period 2002 – 2010, and Secretaría Regional Ministerial del Medio Ambiente de Atacama (2016), for the period 2011 – 2014.

Despite the memorandum of industrial autoregulation, between 2006 and 2009, COREMA approved the expansion of Guacolda thermoelectric power plant with a third and fourth unit, and increased their raw electricity production to 608 MW (Comisión Regional del Medio Ambiente, 2006, 2007). Furthermore, in August 2010, COREMA approved the construction of a fifth unit, which became operational in December 2015, and increased Guacolda raw electricity production to 760 MW (Comisión Regional del Medio Ambiente, 2010a). Nowadays, Guacolda thermoelectric power plant concentrates around 14 per cent of total coalburning electricity production in Chile. Together, Huasco and the territories of Mejillones and Tocopilla, in Northern Chile, Puchuncaví in central coast of Chile, and Coronel, South central Chile, produce 96.9 per cent of total energy from coal-burning thermoelectric plants in the country (Comisión Nacional de Energía, 2018). In September 2010, COREMA approved the expansion and operational improvement of the iron pelletizer plant, property of CAP Minería, including the construction of a third industrial chimney (Comisión Regional del Medio Ambiente, 2010b). In February 2009, Punta Alcalde thermoelectric project entered the COREMA Environmental Impact Evaluation System (SEIA, in Spanish) (Empresa Nacional de Electricidad, 2009).

Because of the persistent high levels of air particulate matter PM10 in Huasco, exceeding 80 per cent of its permissible annual levels, in January 2010, the Regional Secretary of the Ministry of Health in Atacama requested COREMA to declare Huasco as a latent area for air pollution (Secretaría Regional Ministerial de Salud de Atacama, 2010b). According to Chilean environmental regulation, the declaration of a latent area for air pollution requires the establishment of a pollution prevention programme with the objective of reducing the concentration of air pollutants to comply with current environmental legislation (Ministerio Secretaría General de la Presidencia, 2016). It took more than two years, until May 2012, and amid massive mobilisations of local communities in Valle del Huasco, especially from the districts of Huasco and Freirina, for the Ministry of Environment to declare Huasco as a latent area for air pollution due to particulate matter PM10 (Ministerio del Medio Ambiente, 2012). It took another two years, until July 2014, for the beginning of the drafting of the pollution prevention plan for Huasco. In August 2017, the Ministry of Environment published the definitive pollution prevention programme plan for Huasco, which stipulated that "its objective is to reduce PM10 annual concentrations to avoid the saturated condition for this pollutant in the city of Huasco and its surrounding area, in a 10-year implementation period" (Ministerio del Medio Ambiente, 2016).

Consistent with the environmental situation in the district of Huasco, during the decade from 1997 to 2006, the territory had the lowest life expectancy at birth in Atacama region, with 71.86 years for both sexes, 4 years less than the regional average (Ministerio de Salud, 2013a). Huasco also exhibits higher age-adjusted mortality rates for cardiovascular diseases and cancer than the region and the country (Hadjez, 2016; Ministerio de Salud, 2013a). Age-adjusted mortality for respiratory cancer, which has been consistently related to outdoor air pollution (International Agency for Research on Cancer, 2016; Loomis et al., 2013), is considerably higher in the district of Huasco than in Atacama region (Hadjez, 2016). Similarly, age-adjusted mortality for urinary tract cancer, which shows a positive, yet not conclusive association to environmental pollution (International Agency for Research on Cancer, 2016), is also significantly higher in the district of Huasco than in Atacama region, as presented in Table 2 (Hadjez, 2016). Furthermore, Ruiz-Rudolph et al. (2016) provide evidence of the association between the proximity of thermoelectric plants to small populated areas in Chile, including the district of Huasco, and a significant increase in mortality rates due to cardiovascular and respiratory diseases, and cancer among local population, affecting mostly men. They also revealed an increase in cardiovascular, respiratory, and cancer hospitalisation among inhabitants of these territories (Ruiz-Rudolph et al., 2016). Additionally, in 2015, the Ministry of Health conducted a research in Atacama region that evidenced high body concentrations of nickel and arsenic in children from Huasco and Freirina (Ministerio de Salud, 2015a).

Table 2: Selected health indicators for the district of Huasco, Atacama region, and Chile

	Huasco	Atacama	Chile
Life expectancy at birth (years) ^a	71.9	75.5	-
Age-adjusted morality rate due to cardiovascular diseases ^b (deaths per 100.000 inhabitants)	178.1	133.3	156.3
Age-adjusted morality rate due to cancer ^b (deaths per 100.000 inhabitants)	152.6	122.4	145.7
Age-adjusted morality due to respiratory cancer ^b (deaths per 100.000 inhabitants)	30-5	19.4	-
Age-adjusted morality due to urinary tract cancer ^b (deaths per 100.000 inhabitants)	20.4	5.5	-

Note. ^a For the period 1997 – 2006. ^b For the period 2012–2013. Adapted from *Diagnósticos regionales con enfoque DSS.* Región de Atacama, by Ministerio de Salud (2013a), and Salud de los habitantes de Huasco. Mortalidad por enfermedad cardiovascular y mortalidad por cáncer, by Hadjez (2016).

Despite the strong evidence that links outdoor air pollution to health problems, such as cardiovascular, respiratory diseases, and cancer (International Agency for Research on Cancer, 2016; Loomis et al., 2013; World Health Organization, 2016), and the World Health Organization (2006) recommended thresholds for several environmental contaminants, legal regulations on air quality in Chile remain highly permissible for most air pollutants (Maldonado & Ruiz, 2013). For particulate matter PM10, one of the most important air pollutants which is considered "carcinogenic to humans" (International Agency for Research on Cancer, 2013), Chilean environmental regulation allows three times the daily average level recommended by the World Health Organization (2006), as shown in Table 3. Likewise, for sulphur dioxide, a contaminant that mainly affects respiratory function in humans, and has been consistently related to childhood respiratory disease (International Agency for Research on Cancer, 2016; World Health Organization, 2006), Chilean environmental regulation permits 12 times higher daily average concentrations than the World Health Organization (2006) recommendations. For other known air pollutants, such as polycyclic aromatic hydrocarbons or arsenic, which are considered highly hazardous for humans and the environment (International Agency for Research on Cancer, 2010, 2016), there are currently no guidelines.

Table 3: Comparison of selected air pollutant limits

Pollutant	WHO	EU	Chile
Fine particles (PM2.5), annual average	10 μg/m³	25 μg/m³	20 μg/m³
Fine particles (PM2.5), daily average	25 μg/m³	-	50 μg/m³
Particulate matter (PM10), annual average	20 μg/m³	40 μg/m³	50 μg/m³
Particulate matter (PM10), daily average	50 μg/m³	50 μg/m³	150 μg/m³
Sulphur dioxide (SO ₂), daily average	20 μg/m³	125 µg/m³	250 μg/m³
Nitrogen dioxide (NO ₂), annual average	40 μg/m³	40 μg/m³	100 μg/m³
Nitrogen dioxide (NO ₂), hour average	200 μg/m³	200 μg/m³	400 μg/m³
Lead (Pb), annual average	-	0.5 μg/m³	0.5 μg/m ³
Arsenic (As), annual average	-	6 ng/m³	-
Polycyclic aromatic hydrocarbons, annual average	-	1 ng/m³	-

Note. WHO: World Health Organization. EU: European Commission. Adapted from World Health Organisation (2006), European Environment Agency (2017), *Ministerio Secretaría General de la Presidencia* (1998, 2001, 2003a, 2003b), and *Ministerio del Medio Ambiente* (2010).

The Battle of Tatara in Freirina

In 2005, COREMA approved the agroindustrial project Valle del Huasco, property of *Agrosuper*, the largest producer of cow, chicken, pig, salmon, and turkey meat in Chile. The project consisted of the construction and functioning of a concentrated animal feeding operation plant in Freirina, with an estimated capacity for housing more than 2,000,000 pigs in their different maturation stages, and an initial capacity of slaughtering 400 pigs per hour, and a potential to expand to 1,000 pigs per hour (Comisión Regional del Medio Ambiente, 2005). These facilities were located in Maitencillo, in the district of Freirina which is around 31 km distant from Huasco. During the approval of this large-scale project, the President of CONAMA, the only person who opposed this project, declared that "the information provided in the evaluation document [presented by the industry] was not enough to demonstrate that the carrying capacity of the ecosystem will be able to cope, with no disruptions, the incorporation of more than 2 million pigs [...] to Valle del Huasco" ("¿Por qué la CONAMA dijo 'no' a Agrosuper", 2005).

In 2011, the agroindustrial project initiated its operations. In September that year, local communities in Freirina began to perceive foul odours emanating from the industrial facilities, which gradually extended to communities in the districts of Huasco and Vallenar (Movimiento Socioambiental del Valle del Huasco, 2012f). In November 2011, through the National Nursery School Board (JUNJI, in Spanish), local teachers filed a formal complaint against the industry, due to the fact that children in schools in Freirina were suffering from nausea and vomiting, and could neither have breakfast nor play outside in the school yard (Movimiento Socioambiental del Valle del Huasco, 2012f). From December 2011 to February 2012, local communities in Freirina, with the support of Brigada SOS Huasco, a grassroots organisation in Huasco which is a central subject in this research, began to organize in assemblies in different neighbourhoods in Freirina, and eventually coalesced in Freirina Consciente, which later became known as Asamblea de Freirina (Movimiento Socioambiental del Valle del Huasco, 2012g). During this period, local communities organized weekly meetings, "cacerolazos" (popular protests consisting of banging pots and pans in unison, mostly in the evenings), cultural activities, and filed further formal denouncements to regional authorities (Movimiento Socioambiental del Valle del Huasco, 2012g). All this led to no responses, for example, in December 2011, upon request from local communities, the Regional Secretary of Health dismissed their complaints, stating that there were no odours that would justify a sanction against the industry (Movimiento Socioambiental del Valle del Huasco, 2012i).

In March 2012, communities organized and sent a letter to President Sebastián Piñera, requesting: the suspension of water rights for industrial activities in the Huasco basin, the solution for the odour emissions in agroindustrial plant, and the rejection of Punta Alcalde thermoelectric project, in support of inhabitants of the district of Huasco (Movimiento Socioambiental del Valle del Huasco, 2012b). In April 21, foul odours were so intense that they led to the autonomous organisation of barricades and roadblocks in the territory for 12 hours, and the drafting of a petition requesting a meeting with the regional intendent, provincial governor, health and environmental regional authorities for demanding prompt solutions (Movimiento Socioambiental del Valle del Huasco, 2012f). In the meeting, held some days later, there were no solutions and the Intendent abruptly ended the meeting with local communities. This led to a spontaneous road block for 30 hours where regional authorities were not able to leave the city with a condition that the local communities would directly contact national authorities (Movimiento Socioambiental del Valle del Huasco, 2012g). The local communities were given their request and a meeting was set with the national authorities in Freirina. However, the meeting venue was unilaterally changed to Vallenar minutes before its assigned time due to security reasons as per the authorities, and therefore the meeting did not take place (Movimiento Socioambiental del Valle del Huasco, 2012f).

In May 16, children and teachers from Emilia Schwabe school, because of persisting foul odours, took to the streets and blocked them for 15 minutes. This subsequently led to an indefinite roadblock including the entrance to the main Agrosuper plant located in Maitencillo (Movimiento Socioambiental del Valle del Huasco, 2012f). In May 19, and before dawn and while communities were still at the barricades, security forces of Carabineros came from Santiago, confronting local communities in the Quebrada de Tatara, in the district of Freirina. This confrontation led to the violent repression of protests with non-lethal bullets, gas bombs, and water cannons (Instituto Nacional de Derechos Humanos, 2012). During this confrontation, which communities named the "Battle of Tatara" (Movimiento Socioambiental del Valle del Huasco, 2013c), the repressive forces were expelled from the territory. In May 22, and due to the defeat of the confrontational strategy employed by Carabineros, government authorities were forced to meet in the territory. They declared state of sanitary emergency, and agreed to close Agrosuper in a 6-month period (Ministerio de de Salud, 2012). In addition, after the Battle of Tatara, government authorities published the decree of latency zone for air pollution in Huasco (Ministerio del Medio Ambiente, 2012), and COREMA rejected Punta Alcalde project on the grounds of the potential impacts of its industrial emissions on air quality and ocean environments (Comisión de Evaluación Ambiental de Atacama, 2012).



Figure 7: Andrea Cisternas, one of the leaders of the mobilisations in Freirina holds the decree on the closure of *Agrosuper* plant, just signed by the then Minister of Health Jaime Mañalich, in front of her. Maitencillo, Freirina, May 22, 2012. Reprinted with permission from Andrea Cisternas.

According to the National Institute for Human Rights (INDH, in Spanish), it was later concluded that during the Battle of Tatara, in Freirina, "there was an irregular and disproportional use of police guns, causing extremely severe lesions at least in one person participating in the protest", and "there was an indiscriminate use of tear gas and other dissuasive means by the police, away from the established protocols for the use of these dissuasive means" (Instituto Nacional de Derechos Humanos, 2012, p. 35). Also, there were "denouncements of beatings and threats to people while in detention" (Instituto Nacional de Derechos Humanos, 2012, p. 35). Despite this, for local communities, Battle of Tatara still constitutes a milestone in the environmental struggle in Valle del Huasco, which is commemorated each year by grassroots organisations in Valle del Huasco:

And we were there, in Tatara, fighting relentlessly and in unequal conditions, we, armed with stones and battle cries, as the Indians we proudly are. They were paid invaders to fight for an outside cause. We were the owners of this territory and we fought for our own cause, to defend

our life and our history. When looking at our side we saw our families, our neighbours, and friends. We were all there. We knew this territory; we knew that gorge because there we grew up and we played as children [...]. And as we expected, their strategies as police were barren. Their accoutrements were exhausted, and popular resistance grew. Our stones were enough, and the hands for picking them up increased. (Movimiento Socioambiental del Valle del Huasco, 2013c).

Soon after the Battle of Tatara, and after many failed attempts of local communities to receive a written and detailed plan for the closure of the agroindustrial plant in Freirina, many participants begin to doubt government authorities' promises (Movimiento Socioambiental del Valle del Huasco, 2012c). In August 2012, inhabitants of the district of Freirina demanded the resignation of the then Regional Secretary of Health, Lilian Sandoval, for providing misleading information regarding the process of closure of the agroindustrial plant (Movimiento Socioambiental del Valle del Huasco, 2012a, 2012c). In September 2012, and after a meeting with the provincial government authority, government officials acknowledged that the industry had illegally used underground waters, as many people in Freirina were denouncing soon after Agrosuper initiated its operations in the territory (Movimiento Socioambiental del Valle del Huasco, 2012e). Lastly, in November 2012, the then Minister of Health, Jaime Mañalich, approved the resumption of the agroindustrial plant's operations in Freirina, not mediating any improvement in its industrial facilities, and despite the previous promise to local communities for its closure in a 6-month period. This prompted a national condemnation that led Chilean academics and intellectuals to write an open letter where they denounced "the lack of respect to the quality of life of communities which have limited political and communicational visibility", and their concern for "the absence of guarantees to citizens when attaining agreements with authorities [...] and where negotiations under critical moments can turn into a mere tool for lowering social conflict" (Académicos e Intelectuales de Chile, 2012).

Similarly, local communities and grassroots organisations in Valle del Huasco declared that:

Movimiento Socioambiental del Valle del Huasco have decided to move forward to a new phase in our mobilisation. Chile witnesses that we exercise this right after exhausting all possible dialogue: our communities in Freirina and Valle del Huasco, abandoned by authorities, are exercising our legitimate right to defend our lives and the sovereignty that is ours. From this moment, we take in our hands this territory, and the active defence of all our rights as human beings (Movimiento Socioambiental del Valle del Huasco, 2012j).

In December 2012, after roadblocks in Huasco and Freirina, security forces of Carabineros and private guards from the agroindustrial plant, confronted protesters, kidnapped and beat one of the leaders of Movimiento Socioambiental del Valle del Huasco (Movimiento Socioambiental del Valle del Huasco, 2012d). Due to the violence of repressive forces against protesters, and the maintenance of roadblocks for more than three weeks in the territory, representatives of Agrosuper decided to close indefinitely the project, arguing "limited economic viability" ("Agrosuper decide cerrar indefinidamente la planta de cerdos en Freirina", 2012). Industrial representatives and government authorities agreed with local communities that all animals would be evacuated by the end of February 2013, at the latest. However, by the agreed date, there were still around 9,000 pigs in the agroindustrial plant (Movimiento Socioambiental del Valle del Huasco, 2013a). On March 21, people from Freirina issued an ultimatum to government authorities and industrial representatives for a timely and appropriate closure the plant, otherwise "the community will proceed to the effective closure and expulsion of this industry, to end once and for all what has been a permanent aggression to our health and life of the inhabitants of this valley" (Movimiento Socioambiental del Valle del Huasco, 2013d). They kept their promise and did that in April 2013, confirming the existence of around 10,000 dead pigs buried directly under the ground (Movimiento Socioambiental del Valle del Huasco, 2013b).

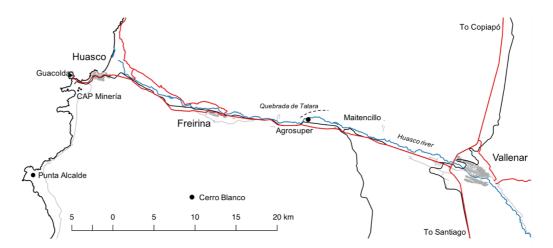


Figure 8: Map of the territory affected by *Agrosuper* plant emissions in Valle del Huasco. Prepared by the author based on geographical information retrieved from *Biblioteca del Congreso Nacional de Chile* (2018), and *Ministerio de Bienes Nacionales* (2018).

As of the date of this research, communities in Freirina and Huasco are still organised, and they hold weekly meetings as Asamblea de Freirina, with permanent participation of members of Brigada SOS Huasco. In November 2014, the Council of Ministries approved Punta Alcalde thermoelectric project, despite its original technical rejection due to the potential impacts of its industrial emissions on air quality, "considering the proximity to the latency zone for air pollution due to particulate matter PM₁₀ in Huasco" (Comisión de Evaluación Ambiental de Atacama, 2012, p. 278). In May 2015, the Regional Environmental Commission in Atacama approved Cerro Blanco project, an open pit mine for the extraction and processing of rutile (Comisión de Evaluación Ambiental de Atacama, 2015). According to its environmental assessment, during its construction and operation, the district of Huasco will exceed the maximum limits for air pollution due to PM10, and it will increase the daily and annual concentration averages for PM_{2.5}, exceeding 80 per cent of the maximum limits for this contaminant. Similarly, the district of Freirina will increase the daily and annual concentration averages for PM₁₀ and PM_{2.5} over the 80 per cent of the maximum limits for these pollutants (Comisión de Evaluación Ambiental de Atacama, 2015). During its evaluation process, the then Regional Secretary of the Ministry of Health, Brunilda González, said that "the increase in particulate matter emissions in Freirina and Huasco will affect people's health, even more if these territories already have the highest mortality rates due to respiratory diseases, compared to the region and the country" (Secretaría Regional Ministerial de Salud de Atacama, 2014).

It is in this context where this research situates. In particular, I focus on the institutional spaces for participation within health centres in the district of Huasco, and in *Brigada SOS Huasco*, one the most important grassroots organisations in the territory. Considering the general research questions posed in Chapter I, and after describing in more detail the context of this investigation, I will attempt to answer these following questions: I) what has been the role of formal participatory spaces within health centres in this context of environmental conflict? 2) how do these participatory spaces interact with broader social movements in the territory, such as *Brigada SOS Huasco*? and 3) how do socioeconomic conditions influence spaces for institutional participation and social movements in Valle del Huasco? In the next chapter, and in order to answer these research questions, I describe in detail the methodology and research design for this purpose.

Chapter 4: Research methodology

In this chapter, I justify the methodology and research design for addressing research questions posed in Chapter 3. The questions are: what is the role of participatory spaces within health centres in the district of Huasco, Northern Chile? How do these interact with social movements in the territory? And how are both institutional participatory spaces and social movements, conditioned by broader socioeconomic determinants in Valle del Huasco? In the first section, and in coherence with what has already been presented in the theoretical revision chapter on social movements, I provide the main characteristics of what constitutes a Marxist methodology for research. In particular, I argue that a critical ethnography methodological approach is an appropriate way for researching participation and social movements in Huasco, Northern Chile. In the second section of this chapter, I elaborate on my personal approach to the Valle del Huasco, which included a preliminary fieldwork in 2014 in the territory. In the third and fourth sections, I describe in detail the research design of this thesis, and the involvement of participants in this investigation. In the fifth section I address issues of quality criteria in the research process, in specific related to researcher's positionality. In the sixth section of this chapter, I examine ethical considerations, and reveal the ethical approvals for this thesis. In the final section, I discuss some of the shortcomings of the research design that need to be considered for a balanced assessment of research findings.

Some general considerations about dialectics and Marxist methodology

In this research, I attempt to retake Marxism as a field of theoretical and political positions that share, essentially, a conception of reality founded in dialectics, from where its political and revolutionary character is derived (Boron, 2006; Gonzalorena, 2011; Sánchez, 2003). I refer to dialectics as the fundamental idea that reality is in permanent movement and transformation, and this movement is originated from the existence of contradictions (Boron, 2006; De la Garza, 2012). From a sociological position, human societies are in constant transformation throughout history, primarily due to the contradictions that arise from the way people produce their material subsistence, i.e., those contradictions that emerge from the development of productive forces and their relations of production (De la Garza, 2012; Sánchez, 2003). Within traditional capitalist societies, the central relation of production corresponds to exploitation,

i.e., the extraction of surplus value, in the form of unpaid labour, by the owners of the means of production from the proletariat (Barker, 2013; Boron, 2006; Meiksins, 1995). This fundamental contradiction explains the existence of antagonist social classes, and Engels and Marx's assertion that "the history of all hitherto existing society is the history of class struggles" (2002, p. 2). Accordingly, dialectic thought posits movement and conflict as essential characteristics of human societies, distancing itself from other conceptions of reality, such as positivism and functionalism. These latter conceptions of reality presuppose, on the contrary, the existence of a natural social order, by addressing conflict as a merely temporal dysfunction or a deviation from the normal functioning of societies (Boron, 2006; De la Garza, 2012; Sánchez, 2003).

Relations of production, i.e., those relations that human beings engage in, in the process of economic production, are reproduced and transformed through human activity and involve the articulation between subjectivity and objectivity (Cox & Gunvald, 2014; De la Garza, 2012; Sánchez, 2003). In this regard, men and women incessantly recreate and modify these relations, regardless of whether these transformations are intentional or not (Barker, 2013; Sánchez, 2003). Men [and women], Marx says, "make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past" (Marx, 1937, p. 5). These external circumstances condition and elicit in the consciousness of human beings the necessity for transformation through human action. Conversely, when social reality is transformed by human action, the external and objective conditions that gave rise to these transformations in the first place, are changed again, in a dialectic, permanent, and mediated process (Cox & Gunvald, 2014; De la Garza, 2012; Sánchez, 2003). It is necessary to say that, within a Marxist perspective, objective conditions are not reduced to material conditions, but refer to the products of human action, be them material, symbolic, or relational, that are situated away from the immediate concrete control of human beings (De la Garza, 2012; Sánchez, 2003).

It is important to insist on the articulation of subjectivity and objectivity within the field of Marxism, since its distortion in what is known as "economic determinism", suppresses human subjectivity and agency, and recognizes in material circumstances determinant factors over human beings, that would irremediably result in the disappearance of social subjects (Boron, 2006; De la Garza, 2012; Sánchez, 2003). The fundamental ideas of dialectics, i.e., the incessant movement and transformation of society emerging from the contradiction between productive forces and their relations of production, and the articulation between subjectivity and

objectivity, allow us to understand human history as open, contingent, and in process of transformation (Boron, 2006; De la Garza, 2012; Sánchez, 2003). Consequently, Marxism recognises that social trajectories and potentialities, whether they take place or not, define the transient and historically contingent character of social institutions, differing from the traditional epistemological notion of causality within social sciences (De la Garza, 2012). Consistently, Marxist methodology results not only in a critical approach to societal problems, since it calls into question the temporality of existing social structures; but it also implies emancipatory and revolutionary aims, given it recognises in human agency the possibility of social transformation and subversion (Boron, 2006; De la Garza, 2012; Sánchez, 2003).

From a methodological perspective, Marxist research within the field of social sciences, where I also include the field of public health, requires addressing four interrelated problems that derive from its dialectical approach. A first problem refers to the transition from highly abstract ideas, such as class struggle, productive forces, relations of production, and capitalism, among others, to more immediate and concrete social settings (Barker, 2013; De la Garza, 2012; Little, 1994). It is in these concrete social settings where abstract ideas acquire a definite and more intelligible language, and where Marxist thought situates itself within tangible social struggles (Barker, 2013; Little, 1994). The transition from abstract ideas to specific research settings implies the existence of multiple levels of generalisation and concreteness for social research (Barker, 2013; Little, 1994). For example, the idea of existing antagonist social classes due to the contradictions that emerge from the development of productive forces and their relations of production, constitutes an abstract generalisation that requires a more nuanced and complex approach for researching within real life struggles (Barker, 2013; Boron, 2006; Cox & Gunvald, 2014). In most cases, this transition reveals, for example, that social classes are "not themselves coherent political actors, capable of acting as single entities: they are inwardly divided by particular interests, subject to conflicting impulses" (Barker, 2013, p. 46). Research in particular contexts is necessary for nurturing Marxist thought, contributing to our partial understanding of society, and incorporating these findings into an evolving theoretical field which is, by its own definition, historically contingent (Barker, 2013; De la Garza, 2012).

A second methodological problem for Marxist research is what has been described as the "methodological capture of movement" (De la Garza, 2012, p. 236). It refers to the comprehension that any social subject or institution is the result of a historical contingent process of articulation of objective and subjective conditions, as explained above, which in turn exert pressure on social subjects to conform to certain trajectories in an open space for the

action of subjects (Boron, 2006; De la Garza, 2012; Little, 1994). In this regard, De la Garza (2012) argues that within Marxism, "the methodological problem is how to describe categories of a non-universal object that can express its origin, its functioning and contradictions, and its potential trajectory, i.e., the methodological capture of movement" (p. 236). This idea of methodological movement is also central in the epistemological proposal of Samaja (2004). For this author, research in health sciences requires moving beyond ahistorical descriptions of structures and functions, be they biological entities or sociocultural formations, in order to apprehend their historical genesis and current development, which is always historically contingent (Samaja, 2004). In this sense, he proposes a methodology for the study of health which includes the ideas of convergent history, as the "presence of the past in an existing object", and divergent history, as the "presence of future in current existence" (Samaja, 2004).

A third methodological problem that derives from a dialectic conception of reality is the idea of "reconstruction of the concrete totality", referring to "the inclusion of what is pertinent to the research object" (De la Garza, 2012, p. 232). It refers to both, the analysis and reconstruction of historical and material conditions in a particular research setting, and the interpretation of the meanings and representations among its social subjects which are in turn conditioned by the former (Barker, 2013; De la Garza, 2012; Sánchez, 2003). As such, Marxist research in social sciences requires focusing on particular concretes, as argued above, and situating these particular concretes within a broader material and symbolic context that allows a comprehensive understanding of the research object, with special emphasis on economic, political, and cultural conditions (Barker, 2013; De la Garza, 2012; Sánchez, 2003). This is also expressed within dialectic thought as the recovery of the specificity of a historical phenomenon, as opposed to the description of universal and ahistorical social phenomena (De la Garza, 2012; Sánchez, 2003). Consequently, Marxist research requires the description and analysis of intersubjectivity and its relationship with objective conditions where social groups live. This intersubjectivity requires, for its approach, the establishment of dialogue between the researcher and research subjects (Barker, 2013; Comstock, 1994).

A fourth problem of Marxist methodology is the recognition and reflection of the researcher's own political praxis and positionality (Barker, 2013; Comstock, 1994; De la Garza, 2012). According to Comstock (1994), this requires the explicit commitment of the researcher to the exploited and oppressed majorities, constituting not only a political position, but also a moral stance within the research. The political position of the researcher is expressed in his or her conception of the world, be the researcher conscious of it or not, which in turn will lead the

research questions, and the selection of a specific research methodology (Barker, 2013; Comstock, 1994; De la Garza, 2012). Furthermore, Comstock (1994) argues that Marxism, and in specific Critical Theory, which is considered part of the Marxist tradition, constitutes an emancipatory research, different from empirical (positivist) and interpretative (constructivist) research. Because of its open-ended character, Marxism is essentially critical, emancipatory, a social science, and a political praxis (Boron, 2006; De la Garza, 2012; Sánchez, 2003). In this regard, Marxism does not comprehend truth as correspondence to reality, but as the possibility for social transformation (Comstock, 1994; De la Garza, 2012; Sánchez, 2003).

Critical ethnography

Critical ethnography constitutes a distinctive methodological perspective within broader ethnographic tradition (May, 1997; Thomas, 1993). It maintains some of the core features of traditional ethnography such as its predominant qualitative character, the need for a long-term engagement in a small-scale research setting, its reliance on participant observation and openended interviews as data collection methods, and its emphasis on describing and analysing participant's perspectives (Jordan & Yeomans, 1995; May, 1997; Thomas, 1993). What differentiates critical ethnography from other methodological approaches such as Positivism and Postmodernism is its reliance on Critical Theory, as part of the broader Marxist tradition (Jordan & Yeomans, 1995; Masemann, 1982; May, 1997), and the consequent critical reflexivity that accompanies researchers during the research process (G. Anderson, 1989; Madison, 2011). Thomas (1993) also argues that critical ethnography includes postmodernist ethnography, considering its emphasis on cultural critique and discourse analysis. In his words, "the potential of postmodernism lies in its subversion of conventional ways of thinking and its ability to force re-examination of what we think is real" (Thomas, 1993, p. 25). Although I agree to a certain extent with this position, for this research, I do not include Postmodernism within critical ethnography. The reason behind this decision is the Marxist criticism of most postmodernist approaches related to their vision of a multiple, often-fragmented and disarticulated reality, rejecting any attempt for reconstruction of totality, and therefore any unified political project (Barker, 2013; Meiksins, 1997; Žižek, 1997).

Critical Theory originally denotes the theoretical developments made by the Marxist oriented Frankfurt Institute for Social Research (Leyva & Sampaio, 2012). The Institute's aim was to reestablish the link between social theory and history by underlining the description and analysis

of social problems within their specific socioeconomic and historical contexts as a process of reconstruction of totality (Leyva & Sampaio, 2012). More broadly, Critical Theory corresponds to a theoretical and methodological perspective which developed in Western Europe and North America during the interwar period. Contrary to structuralist Marxist positions, it contributed immensely to the study of culture within Marxism, previously regarded as a mere reflection of economic structure (Amadeo, 2006; P. Anderson, 1979). It has been considered by some Marxist scholars, particularly from Latin America, as pessimistic, due to its eminently academic character, and its relative detachment from any political praxis after the shattering effect of Stalinism on non-orthodox Marxists scholars, and the consolidation of totalitarian communist regimes (Amadeo, 2006; Leyva & Sampaio, 2012).

For Leyva and Sampaio (2012), Critical Theory requires engagement in dialogue with people as active subjects that incessantly construct and transform the world, which differs from mere external observation or the design of experimental settings. In this sense, they acknowledge the importance of engaging in revolutionary and subversive action, which requires a process of self-understanding and critical thinking among research subjects and researchers (Leyva & Sampaio, 2012). In this respect, critical ethnography departs from the ontological and epistemological social atomism of positivist, naturalist, and postmodern ethnographies (Comstock, 1994; Jordan & Yeomans, 1995; Sharp, 1982), but assumes a dialectic approach for researching the relationship between human agency and socioeconomic structures (Jordan & Yeomans, 1995; Madison, 2011; May, 1997). Central to this critical approach is the role of ideology and hegemony in maintaining, or transforming, oppressive social relations, (Beach, 2016; Madison, 2011; May, 1997). In this regard, May notes that:

Critical ethnography attempts to move beyond the accounts of participants in particular settings to examine the ideological premises and hegemonic practices which shape and constrain these accounts. Critical ethnographers argue that the 'common sense' views which underpin participant accounts, and the settings in which these are expressed, contribute to the unequal distribution of power and control in these settings. The critical perspective brought to the research is thus linked to a general theory of society and a concept of social structure which exists beyond the actors' perceptions of it (May, 1997, p. 199)

From the latter definition of critical ethnography, follows the importance of the concepts of ideology, hegemony, and common sense for the research process. Broadly, I refer to ideologies as socially shared "significations" of reality (Fairclough, 1992, p. 87). Ideologies, far from being merely reflections of a material structure, are crystallized and recreated in discourse and other

non-discursive practices within institutions, exerting substantial pressure among social subjects in order to produce, reproduce, and transform oppressive social relations (Fairclough, 1992, 2010; Samaja, 2004). Hegemony refers to the cultural mechanisms displayed by dominant social groups aimed to reproduce the ideological formation that justifies this domination, subjugating oppressed individuals and communities and maintaining social organisation (Barker, 2013; Fairclough, 1992; Gunvald & Cox, 2013). Lastly, common sense is defined as "conceptions of the world" which are socially shared, and are often unconscious, fragmentary, and contradictory (Gramsci, 1988, p. 325).

Jordan and Yeomans (1995) argue that ethnography constitutes a valuable research methodology for Critical Theory in that it allows researchers to explore and describe social relations within contemporary capitalist societies. This resonates with Little's (1994) call to review what he defines as the microfoundations of Marxism, suggesting that social researchers need to depart from structuralist and economicist accounts of dialectic materialism, and to focus on small-scale settings of research, in line with the recognition of multiple levels of abstraction and concreteness within Marxist methodology, as described in the previous section. Similar insights are provided by Žižek (2012) in relation to the contradictions and theoretical complexities of recent anti-capitalist mobilisations across the world. He argues for the need to focus social research on particular historical settings, while maintaining a broader perspective of the inner dynamics of capitalism and globalisation (Žižek, 2012).

A characteristic of critical ethnography, yet not exclusive to this approach, is researcher's reflexivity on the investigation process, which also constitutes an element of rigor in qualitative research (May, 1997). Hammersley and Atkinson (1983) refer to the importance of reflexion on theoretical assumptions and biases from part of the researcher. As such, the researcher assumes a distance from naturalist and positivist views of ethnography which both entail the supposed reduction, or neutrality, of the researcher in relation to his or her subject of study. Other critical ethnographers suggest a number of reflexive elements, such as: the reflection on the relationship between theory and data; the effects of the researcher among research participants; informant's common sense; and the dialectical relationship between human agency and social structures (G. Anderson, 1989; Foley, 2002; May, 1997). Furthermore, Madison (2011) discusses researcher's reflexivity in relation to the intentions of the researcher; the consequences and potential to do harm among communities where research is conducted; and the moral responsibility to represent and interpret participant's accounts.

Research design

As discussed above, this research attempts to understand the role of formal spaces for participation within health centres in the district of Huasco, in a context of environmental conflict, and how do these institutional spaces for participation interact with social movements. In addition, it seeks to evaluate how socioeconomic and environmental conditions in the territory influence both, formal spaces for participation in local health centres, and social movements. For this, I conducted a nine-month critical ethnography in Huasco, in Atacama Region, Northern Chile, from September 2016 to May 2017. The district of Huasco has a primary health care network comprising the health centre Juan Verdaguer, in the city of Huasco, and rural health centres in the localities of Huasco Bajo, Carrizal Bajo, and Canto del Agua. There is also the community hospital Manuel Magalhaes Medling, a low complexity hospital that functions normally as a primary health care centre, and includes 15 available beds for the entire population of the territory. When patients require more complex health care attention, they are referred to the provincial hospital Monseñor Fernando Ariztía Ruiz in Vallenar, the capital city of the province of Huasco, distant 47 km from the city of Huasco. In this research, I focus on the primary health care centre Juan Verdaguer, and the community hospital Manuel Magalhaes Medling, both located in the city of Huasco.

Initially, this research consisted of participant observation of local health councils' activities in each health centre in the district of Huasco, and their daily interactions with health workers. I also included participation and observation with members of Brigada SOS Huasco, one of the most important grassroots organisations in Valle del Huasco. Participant observation corresponds to a research method that allows the researcher to understand a social problem beyond participant's narratives. It is an appropriate method within critical ethnography, since it facilitates the researcher to engage into dialogue with research participants, and to contrast participant's narratives with material observation (Green & Thorogood, 2004). It also allows the researcher to document social interactions that might not be relevant for research participants, but still constitute valuable research findings (Green & Thorogood, 2004). Within health research, participant observation is also adequate for evaluating health care organisations and programmes, and therefore, it is suitable for approaching the dynamics of participation in health in real-life settings (Green & Thorogood, 2004). For the purpose of conducting participant observation, and ethnography in general, I moved to Huasco and I lived there during this research. This allowed me to share daily experiences with research participants, to strengthen trust and rapport with them, and to gradually attain an insider's perspective of the

field. All my observations and reflections were systematically documented in two field notebooks.

Due to the infrequent activities of both local health councils, and as one of the research participants declared "we have not met in like a year" (local health council participant 1), I had to restrict my observations of these spaces to one regional civil society council meeting within the Regional Health Service in Atacama, held in Copiapó in March 2017. I also included multiple visits to both health centres and other community settings where local health councils meet and interact with health workers, such as one neighbourhood committee centre, located nearby one of the health centres. On the other hand, with members of Brigada SOS Huasco, I had the opportunity to participate in community workshops, community meetings, public protests, radio programmes, cultural activities, and many hours of sharing a bus seat with them in our frequent trips from Huasco to Freirina, and vice versa. In this regard, Brigada SOS Huasco's dynamics of organisation and mobilisation often exceeded the administrative limits of this territory. Often, it was necessary for me to go to Vallenar and Alto del Carmen, in order to participate in their activities, and comprehend in detail the socioenvironmental struggle of Brigada SOS Huasco. Particularly important is Asamblea de Freirina, a grassroots organisation mainly based in the district of Freirina, since these organisations were intimately linked earlier in the period of the mobilisations between April and December 2012.

This research also considered in-depth and semi-structured interviews among members of local health councils and health workers in both, primary health care centre Juan Verdaguer and community hospital Manuel Magalhaes Medling. In addition, I planned to conduct in-depth and semi-structured interviews with members of *Brigada SOS Huasco* and *Asamblea de Freirina*. Semi-structured and in-depth interviews correspond to one of the most critical research methods within qualitative research. In particular, interviews constitute a method for approaching research participants' worldviews, representations, and experiences, through the use of language (Green & Thorogood, 2004). In simple terms, it is a "conversation that is directed, more or less, towards the researcher's particular needs for data" (Green & Thorogood, 2004, pp. 79–80). For this purpose, I designed, with the support of my supervisors, topic guides consisting of open questions oriented to elucidate perspectives and experiences of different participants about participation, social movements, and environmental health. These topic guides were then translated and adapted into Spanish. Because of the flexible approach of this research, once I initiated my interviews and analysis, I could redirect topic guides to previously non-considered topics. All interviews were audio-recorded, and transcriptions were obtained

in Spanish by the author and two 3rd year sociology students from the University of Valparaíso, after establishing ethical considerations about the recordings, confidentiality, anonymization, and economic retribution.

Recruiting participants

Initially, I approached health workers for this research. Before initiating my fieldwork, I emailed directors of local health centres, including primary health care centre Juan Verdaguer, and community hospital Manuel Magalhaes Medling, explaining them the purpose of this research, and requesting a formal meeting in the territory. This was also a necessary step to obtain the ethical approval from University of Valparaíso, Chile, which required the written acceptance of this research by the directors of these health centres. After a preliminary meeting held in Huasco, where I had the chance to explain in more detail the objective of this research, and after answering their own questions and observations, they accepted to participate, and put me in contact with other health workers that were involved in local health promotion and community participation programmes. They also suggested the inclusion of other health workers that, although not being formally involved in participatory spaces within the health centre, still could provide useful insights for the topic. Some of them were previously involved in local health councils, or collaborated intermittently with local communities in Huasco. Considering both health centres, and through this purposive sampling, I had the opportunity to conduct seven in-depth and semi-structured interviews with health workers in the district of Huasco.

For recruiting community members involved in spaces for participation within local health centres, I used the snowballing technique. Initially, I contacted one of them via one of the coordinators of a local health council in Huasco. After an initial meeting with this participant, where I explained to her the purpose of this research, and answered some of her questions, she accepted to participate, and introduced me to the rest of participants in the two local health councils. She also helped me to organise two focus groups, and invited me to participate in one of their meetings in Copiapó. In total, I conducted five in-depth and semi-structured interviews among these participants, including a former president of one of the local health councils that no longer participates in this space, and two focus groups, one in every health centre in Huasco, reaching in total ten participants. While all interviews were conducted in participants' homes, one focus group was organised in a health centre, and another one in a neighbourhood council

centre. Participants of local health councils also suggested that I interview provincial and regional health authorities responsible for participation in health, and brought me into contact with them. I contacted them, and after explaining the purpose of this research, they also accepted to participate. Later, I interviewed them in the cities of Vallenar, Copiapó, and Santiago de Chile. In total, I conducted five in-depth and semi-structured interviews with them.

To recruit participants of social movements in Huasco, I used my contacts and networks established during my preliminary fieldwork during 2014. In that occasion, as it is today, it was not easy to gain access to these communities, given prior attempts of political and economic manipulation, and overexposure of grassroots organisations to social research initiatives driven by private industries with diametrically opposed interests. After my preliminary research, I maintained regular contact with some of them until the beginning of my fieldwork in September 2016. With members of *Brigada SOS Huasco*, I conducted mainly a purposive sampling, considering their trajectories and experiences in the organisations. However, I also considered their suggestions to interview other people that were not part of their organisation, but who could contribute significantly to this research. As such, I interviewed members of *Brigada SOS Huasco*, *Asamblea de Freirina*, and *Asamblea por el Agua de Guasco Alto*, in the Andes Mountains. In total, I conducted 14 in-depth and semi-structured interviews with them. I also conducted one focus group with members of *Brigada SOS Huasco* at the end of my fieldwork, including five participants.

Finally, and in an unexpected way, during my research I found out about a new space for citizen participation in Huasco, the Programme for Environmental and Social Recovery of Huasco (PRAS, in Spanish). This space was coordinated by the Ministry of Environment and included representatives of formal community organisations, industries, social movements, municipal and regional government authorities. In May 2016, before initiating my fieldwork, members of *Brigada SOS Huasco* invited me to deliver a presentation about environmental health in Huasco, in the context of this programme. Later, in September 2016, they formally invited me to participate as a silent observer in this public and open space, and I was introduced to the rest of the participants in the meeting, and obtained the contact of its coordinators. Consequently, I participated in every monthly session from September 2016 to April 2017, and conducted two in-depth and semi-structured interviews with officials from the Ministry of Environment, and five interviews with municipal and regional authorities.

I need to say that not all solicitudes for participating in this research were welcomed. Once, a health worker accepted an interview, with the condition of me not to record her, nor signed an informed consent. Although we still maintained an informal conversation, and some of her insights were valuable for this research, I did not include her in the data corpus of this investigation. On another occasion, a worker from the Ministry of Environment accepted an interview, but later postponed and never confirmed a definitive date. In addition, one member of a grassroots organisation requested to review the transcription of her interview, since she was worried about some confidential information that she disclosed during the interview. For this research, I then included the revised transcript, and assured her complete confidentiality and anonymization by deleting the original transcript and audio recording. Most of health workers, participants of local health councils, and members of grassroots organisations were always willing to talk and tell their experiences and support the development of this research. At the end, I had a total of nine months of participant observation, thirty-eight interviews, and three focus groups, as shown in Table 4.

Table 4: Interviews and focus groups during this research in Valle del Huasco

	Interviews	Focus groups	
Health workers	7	-	
Regional and national health authorities	5	-	
Local health council's participants	5	2	
Social movements' participants	14	I	
Municipal workers	5	-	
Ministry of Environment workers	2	-	
Total	38	3	

Data analysis and research quality

For interviews and focus groups' transcripts, I coded multiple times and refined some codes and categories after feedback from my supervisors and some research participants, illuminating some personal prejudices and misconceptions, but also strengthening some initial ideas. Here, I use Saldaña's (2009) definition of codes as a "word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-

based or visual data" (p. 3). Likewise, categories and themes correspond to even higher descriptive and analytical unities that consist of related codes and categories, respectively (Saldaña, 2009). For this research, I developed codes that are eminently descriptive, such as "political context", "economic context", and "financing of health centres", while others require a higher level of analysis, such as "hegemonic strategies", "counterhegemonic strategies", "consequences derived from participation", and "pollution neglect". Other themes, despite being eminently descriptive and inductive, were further developed from theory, such as "commodification of participation", and "different perceptions on violence". Overall, I attained 98 codes and 34 categories. For this, I used the software NVivo 11.

For addressing quality criteria for this research, I attempted to analyse interviews, focus groups, documents, and my own observations, considering the four problems posited by Marxist methodology, i.e., a balanced transition from abstract ideas to particular research settings, the methodological pursue of movement, the reconstruction of totality, and researcher's understanding of his own political praxis (Barker, 2013; De la Garza, 2012; Sánchez, 2003). The latter includes the establishment of dialogue between the researcher and research participants, as the essential moment of Marxist research (Comstock, 1994; Cox & Gunvald, 2014; Jordan & Yeomans, 1995). However, for a more schematic and transferable account of quality considerations of this research, and in order to provide a more intelligible and accessible description, in what follows I use Hannes (2011) critical appraisal of qualitative research. This is used in Cochrane systematic reviews of interventions, and includes four assessment criteria which are: credibility, transferability, dependability, and confirmability (Hannes, 2011).

First, credibility "evaluates whether or not the representation of data fits the views of the participants studied, whether the findings hold true" (Hannes, 2011, p. 4). In this investigation, research participants and peers contributed to the validation of research findings. This included informal, but systematic conversations with members of local health councils, health workers, and grassroots organisations. I maintained contact through email and telephone with research participants during the writing of this research. It also included more formal mechanisms for validation among peers. These latter included my participation as a moderator on the seminar titled "Role of Primary Health Care and Environmental Pollution" during the First Congress of Chilean Health Faculties, held in January 2017; the First Community Dialogue of Public Health in Valle del Huasco, held in May 2017; the research workshop titled "Health and Social Justice Activism", at the London School of Economics and Political Science in December 2017; my participation in the Poster Day at the London School of Hygiene and Tropical Medicine

in March 2018; the Congress of the Society for Latin American Studies at the University of Southampton, in March 2018; the presentation of my preliminary research findings at the Faculty of Health Sciences, American University of Beirut in May 2018; and a seminar on participation in health and social movements in Valle del Huasco organised by *Brigada SOS Huasco* and *Asamblea de Freirina* in September 2018. Additionally, my supervisors provided me valuable feedback on a regular basis during this research.

From the discussions, comments, and suggestions I received in these spaces, I revisited some of my initial ideas, and improved many aspects of this research. I included, for example, a more detailed description of Marxist methodology, considering the marginal situation of this theoretical tradition within the field of public health (academic supervisors and peers at the London School of Hygiene and Tropical Medicine; social movements' participants). I also attempted to address in more detail the chapter on social movement theories, and the different epistemological positions underlying each one (Department of Psychological and Behavioural Science, London School of Economics and Political Science; Faculty of Health Sciences, American University of Beirut). I expanded the chapter on research context in order to articulate as clearly as possible the contextual problems affecting local communities (academic supervisors; social movements' participants; Congress of the Society for Latin American Studies). In addition, I tried to provide a more detailed account of primary health care services in the district of Huasco, considering its importance for social movements and primary health care workers in the province (First Community Dialogue of Public Health in Valle del Huasco; primary health care workers).

Also, I was attentive to negative or unusual cases in this research, some of which are described in this chapter (as the case of the people that declined to participate in this research), and through the next chapters on research findings. By including these, I attempt to evidence the complexity of this particular research setting. In doing so, I reflect on my own theoretical assumptions as a researcher, by questioning if an unusual case corresponds to a mere exceptionality, or is a clue for a more complex underlying subjectivity which I was not aware of. That was the case, for example, among the few members of *Brigada SOS Huasco* who insisted on participating in the Programme for Environmental and Social Recovery of Huasco. If initially I perceived that these cases were relatively isolated within the organisation, after interviewing other participants, I recognised that those exceptional cases were in fact expressing a similar conflict underlying most of research participants. Another element that contributes to the credibility of this research, is the inclusion of verbatim transcripts from research participants,

considering their importance for a detailed ethnographic account, for exemplifying and enriching the content of research categories, and for recovering participants' voices in this research. For the same purpose, I also include extracts from diverse documents that I could collect during this investigation.

A second criteria for quality assessment in qualitative research is transferability. In general terms, transferability "evaluates whether research findings are transferable to other specific settings" (Hannes, 2011, p. 4). Since one of the characteristics of qualitative research is the difficulty, or even impossibility, for its generalisability (Green & Thorogood, 2004), transferability here refers mainly to provide sufficient details of research participants and contextual background information (Hannes, 2011). As such, it resonates to a certain extent, to the importance placed on the recovery of the specificity of a historical phenomenon within Marxist methodology, as described in the previous section (De la Garza, 2012). In this study, I provide a detailed description of research participants, without compromising their confidentiality and anonymity. In this regard, due to the small population in Huasco, I had to omit some information that could be considered important for assessing some of the results of this research. For example, differences between participants in each local health council in the district of Huasco, health workers' occupation and workplace, and regional health authorities' hierarchical positions. Similarly, in Chapter 3, I attempt to characterise extensively the main socioeconomic and environmental conditions in the district of Huasco. However, the chapter does not include other serious environmental conflicts in Valle del Huasco, despite their evident impact in communities' health, in order to maintain a relatively coherent and delimited contextual narrative.

A third criteria for quality assessment corresponds to confirmability, referring to "the extent to which findings are qualitatively confirmable through the analysis being grounded in the data and through examination of the audit trail" (Hannes, 2011, p. 4). Specifically, it considers researcher's reflexivity, and the provision of information about researcher's background, education, and methodological approach to the research (Hannes, 2011). In this regard, I have provided a clear account of my own epistemological and methodological positionality throughout this thesis. Similarly, I have justified my political and academic interest in this research, and the previous steps for this investigation. Since researcher's reflexivity is a fundamental aspect of critical ethnography (Jordan & Yeomans, 1995; Madison, 2011; May, 1997), in the next paragraphs I share some personal reflections regarding the research process, my own positionality, and my relationship with research participants.

I consider I have properly approached the daily lives and perspectives of people participating in this research, especially among members of Brigada SOS Huasco, with whom I have spent many hours in their homes and with their families. Sometimes, I realised that I was thinking and feeling as one of them during my investigation. I can recall how twice I was so immersed in my situation as a grassroots participant that it was difficult to visualise me again as an external researcher. The first time occurred when members of Asamblea por el Agua de Guasco Alto requested my professional advice for dealing with arsenic and manganese pollution of superficial waters in Alto del Carmen, because of the Pascua Lama mining project (Hadjez, Vivaceta, & Tchernitchin, 2017a, 2017b). During an entire week, I lived and worked with them in bringing a legal application for protection at the Supreme Court of Justice in Chile. We slept few hours to complete the legal application on time. I felt exhaustion, frustration and fear for the environmental abuses committed against these communities by transnational enterprises, with the protection of government authorities. Fear was, I think, a shared feeling that allowed me to understand grassroots communities' daily experiences from a much closer position. This provided me with a crucial emotional resource for strengthening my relationship with the rest of the organisations in Valle del Huasco.

A second moment of unconscious boundary blurring between my role as a researcher and as a community member occurred during a meeting with members of Asamblea de Freirina. I was participating in one of their weekly assemblies when one of its members brought her sister, an environmental engineer from outside Freirina, to explain a technical issue regarding the future construction of a slurry pipeline across the entire Valle del Huasco. To my surprise, apart from the technical information provided, the speaker turned to be delivering a moral discourse on how local communities were ignorant (a word repeated more than ten times during the presentation), and how they were largely responsible for local environmental disasters. Furthermore, she continued encouraging members of Asamblea de Freirina to engage in dialogue with industrial representatives and government authorities to find together the best alternative for constructing the pipeline. Of course, she was not aware of multiple failed efforts of these communities to dialogue with political authorities and industrial representatives. Seated next to me was one of the most active and instructed leaders from Brigada SOS Huasco, who rapidly felt underestimated and shamed by the professional. She kept silence during the rest of the meeting. In that moment, I felt anger for what I felt was a disrespectful, and erroneous judgement from this person to all of us.

Besides these specific examples, I am also aware of the differences between local communities and myself. In Huasco, during this critical ethnography, I lived in a solid, one-bedroom house in a middle-class neighbourhood in lower Huasco. Huasco is divided into upper and lower sectors due to the presence of a train line, a geographical division that also parallels, to a certain extent, a socioeconomic division. In the lower part, there are markets, municipal and government offices, and most accommodated neighbourhoods in relation to the entire district of Huasco. Contrary to what one might think from the outside, in general, participants of these social movement and grassroots organisations cannot be considered as poor and vulnerable people. I describe them mostly as salaried workers, professionals, and peasants with an income that allows them to live with no significant economic pressure. In this regard, I did not have substantial economic differences with them. This was often surprisingly acknowledged by them, and helped me to develop trust and rapport with community members. Similarly, since I was raised in Copiapó, the capital city of Atacama region which is only 191 km distant from Huasco, I did not find significant cultural differences with people in the territory, but we shared many cultural and historical elements that have made it easier for me to be invited to their daily activities and to interview them. But as I said, we did have some differences. One of them was the fact that in case of any health problem, in a context of environmental pollution, I had the possibility to leave Huasco anytime I wanted to, but most people from local communities could not.

Lastly, Hannes (2011) proposes dependability as a fourth criteria for assessing quality in qualitative research. According to her, "dependability evaluates whether the process of research is logical, traceable and clearly documented, particularly on the methods chosen and the decisions made by the researchers" (Hannes, 2011, p. 4). It involves researcher's reflexivity on the investigation process, and peer review of research findings, which have been described elsewhere. It also includes the triangulation of different research methods in order to enhance research results. For this research, I attempted to triangulated most of research methods including participant observation, interviews, focus groups, and document analysis. In relation to the latter, of utmost importance were two participants from social movements in Huasco that provided me with valuable documents related to environmental health struggles in the territory, which have been systematically complied since the early 1990s. I also contrasted research participants' narratives with regional and provincial media articles, in particular from Diario Chañarcillo, and El Noticiero del Huasco newspapers, from April 2012 to present day. Another important source for contrasting my research findings, was the thesis "Social impact of iron mining in Huasco: origins and developments of socioenvironmental organisations

according to their protagonists, 1960-2012" (Elgueta, 2013). As far as I know, it is the only original academic research on social movements in the district of Huasco. When needed, I also requested through transparency processes official information to government institutions.

Limits of this research

As I mentioned above, one important limitation of this research design was the difficulty for conducting participant observation in local health councils' activities both in the primary health care centre Juan Verdaguer and community hospital Manuel Magalhaes Medling, in the district of Huasco. Since local health council meetings were sporadic, it would have been optimal to extend my fieldwork to participate in, at least, one annual participatory health appraisal in each health centre. As a result of this limitation, most of the data related to local health council participants came from in-depth and semi-structured interviews, focus groups held in each health centre, and document analysis of meeting minutes, participatory health appraisals held between 2016 and 2017, and press releases in the provincial newspaper *El Noticiero del Huasco*. Additionally, I included observations from my participation in one regular meeting held by a local health council in Huasco during my preliminary fieldwork in 2014.

A second limitation of this research is the failure to include the perspectives and narratives of active workers from the industries in Huasco, in particular CAP Minería and *Guacolda* thermoelectric plant, considering the centrality of the working class in Marxist analysis (De la Garza, 2012; Lazar, 2017). In order to approach this collective subject, I draw exclusively on in-depth and semi-structured interviews with four ex-workers from CAP Minería, and one active dockworker from an outsourced company for the loading and unloading of coal and iron ore. Due to the overwhelming presence of provincial industries in the territory, most of interviewees that lived in the district of Huasco were relatives of workers from these industries. Furthermore, I could observe workers' representatives in the PRAS, but they usually remained silent during the meetings. Consequently, it is safe to say that the perspectives of local workers, particularly those that support industrial activities in the district of Huasco, are not present in this research.

From a theoretical perspective, a crucial problem of this research was my late approach to theories of social movements in the Middle East and North Africa, prompted by my visit to the Faculty of Health Sciences at the American University of Beirut in May 2018. In particular,

I consider it would have been beneficial for this investigation the inclusion of theoretical contributions from scholars such as Fawaz Gerges (The New Middle East: protest and revolution in the Arab world, 2013; Contentious politics in the Middle East: popular resistance and marginalised activism beyond the Arab uprisings, 2015) and Asef Bayat (Life as politics: how ordinary people change de Middle East, 2013; Revolution without revolutionaries: making sense of the Arab spring, 2017). Similarly, I did not include contributions from revolutionary feminists such as Angela Davis (Women, culture and politics, 1990; Freedom is a constant struggle: Ferguson, Palestine, and the foundations of a movement, 2016), and bell hooks (Feminism is for everybody, passionate politics, 2000), to the study of social movements. In this regard, I did not include a broader gender perspective for this research. My interest in revolutionary feminism is also recent, prompted by the course on Feminism in the South, organised by the Latin American Council of Social Sciences between May and September 2018. Despite some general observations regarding the importance of women in the territory, I did not explicitly address gender inequalities during my observations, which looking back at now I realise they were present.

Ethical considerations

Through this research, and considering the political and social local context, participants were ensured voluntariness, confidentiality, and anonymity. All participants received an information sheet before conducting any interview or focus group, and were requested to sign an informed consent document, if they accepted to participate in this research. None of the participants were exposed to a situation in which their dignity was made vulnerable nor did this research result in any moral damage. There was an occasion when one participant did feel psychological distress during one of the focus groups due to the questions posed, and then I immediately offered support and stopped the discussion. Other participants also supported her, and after some minutes, she requested to continue. Due to the small number of health workers in Huasco, and members of local health councils, I put special consideration to the anonymizing process, mostly if their working positions can be easily identified. For this, I refer to all of them with the female gender "she", and refer to their interviews as health workers in general, and local health council participants in general. I also grouped regional and national health authorities for reassuring anonymization and confidentiality. In this case, I refer to all of them as regional health authorities. For municipal workers and Ministry of Environment authorities, I refer to all of them as Ministry of Environment authorities.

For conducting this research, I obtained local ethical approval from the University of Valparaíso Faculty of Medicine Ethical Committee, and from the London School of Hygiene and Tropical Medicine Ethical Committee. During this investigation, there were no protocol violations, nor modifications of the original research design. Signed informed consents, field notes, audio recordings, interviews and focus groups' transcripts, are stored according to the data management plan for research students approved for this thesis in October 2015. Preliminary results of this research have been shared with local communities, including local health council participants, primary health care workers, and members of grassroots organisations in the district of Huasco. The final research will be given to local communities and health workers, as I consider this research belongs to them, since it was constructed as a collective endeavour. It will be shared not only as a final written document, but also through a series of planned seminars after my return to Chile.

Chapter 5: Local health councils in Huasco

In this chapter, I provide an account of local health councils, the main institutional spaces for participation within health centres in the district of Huasco. I describe their main characteristics, and I include the diverging perspectives on these spaces among community participants, health workers, and regional health authorities. In the first section, I provide the narratives of participants, and the observations and document revision of some of their activities. I highlight participant's own recognition of being impartial and non-political. In the second section, I refer to the contributions of local health councils to the improvement of health care attention within local communities in Huasco. In the third section, I provide the perspective of regional health authorities and local health workers in the district of Huasco regarding local health councils. I emphasise their description of these spaces as merely formal and instrumental, and the problems derived from the evaluation of participatory processes. In the fourth section, I describe in detail, the role of local health councils regarding environmental health problems in the territory, considering their epidemiological importance and generalised recognition. In this regard, I suggest that local health councils have not been able to address this problem mainly because of the economic dependency of local communities and public health services on polluting industries; because of their biomedical approach to health and health care attention; and because of health workers' lack of training on environmental health.

"We have to be impartial and non-political"

In Huasco, formal spaces for citizen participation in health were gradually created during the implementation of the family and community health care model since the late-1990s. The local health council in the community hospital Manuel Magalhaes Medling was created in 1997, and was legally constituted in October 2007 in accordance with Law 19,813 (Municipalidad de Huasco, 2007). The local health council in the primary health care centre Juan Verdaguer was created in January 2009 (Municipalidad de Huasco, 2009), in line with the requirements from the Regional Health Service in Atacama for the inclusion of participation as one of the national health-related goals, as explained in Chapter 3. Furthermore, in 2008, the Regional Secretary of the Ministry of Health in Atacama coordinated the first civil society dialogues in the district of Huasco, focusing on the topics of health promotion and self-care (Secretaría Regional Ministerial de Salud de Atacama, 2010a). In 2014, the Regional Health Service in Atacama also

held civil society dialogues in the entire province of Huasco, focusing on the deficit of medical specialists in the province, the implementation of the family health care model, and patient's rights and duties (Servicio de Salud de Atacama, 2017).

Local health councils correspond to the most important formal mechanisms for citizen participation in health in the territory. It is in these spaces where local participatory health assessments are conducted, and to whom annual public accounts and civil society dialogues are mainly addressed (Regional Health Authority, personal communication, January 2017). Local health councils in Huasco are part of the provincial and regional civil society councils within the Regional Health Service in Atacama (Servicio de Salud de Atacama, 2014), and the Regional Secretary of the Ministry of Health in Atacama (Secretaría Regional Ministerial de Salud de Atacama, 2010a). Both of these regional civil society councils also include health workers' representatives, and other formal grassroots organisations, such as neighbourhood councils, elderly groups, associations of people with disabilities, and representatives of local indigenous organisations (Servicio de Salud de Atacama, 2014). These are advisory bodies to provincial and regional health authorities, with the aim of representing local communities, supporting the implementation of projects for the improvement of hospitals and primary health care centres' infrastructure, and disseminating information from provincial and regional health institutions to local communities, among others (Servicio de Salud de Atacama, 2014).

Local health councils, both in the community hospital and in the primary health care centre, include between four to twelve active participants from local communities, most of them women over 60 years old. At the regional level, and according to the list of participants in the regional civil society council's meetings within the Regional Health Service of Atacama in March and April 2017, women represent around 80 per cent of all participants. All interviewees have lived in Huasco for the past 20 years, at least, and most of them have lived their entire lives in the territory. Frequently, members of local health councils in Huasco also participate in other community organisations, such as neighbourhood councils, elderly groups, church organisations, and health volunteers' groups. Many of them also have a long record of participation, with little turnover among their organisations and directive boards (local health councils focus groups 1 and 2). One interviewee expressed, with anguish, that she was tired and "demoralized" of continuing participating in one of the local health councils, but she persisted in her attendance because otherwise "no one else would participate" (local health council participant 1). She gave the impression that she assumed she was responsible for the eventual discontinuation of the organisation. In contrast, other participants enumerated

enthusiastically their different positions in multiple organisations, and were very proud of the number of years of experience working with their communities. In general, they criticised young people for not participating in these spaces (local health council focus groups 1 and 2; regional civil society council meeting).

Most participants in local health councils in Huasco defined themselves as "impartial and nonpolitical" (local health council focus group 01), and expressed the importance of dialogue and procedural aspects of democracy and participation in their work within local health councils. These procedural aspects include the organisation of periodical elections for their representatives, signature collection to gain public support for their demands, and letter writing for regional and national political representatives. During my fieldwork, I observed that for community participants, collective participation in health referred mainly to their right to give an opinion; to ask questions and receive answers from health authorities; and to disseminate health information from public services to local communities, because, as one participant said, "lay people talk for the sake of talking" (regional civil society council meeting). This common conceptualisation of participation in health implies that during my interviews and focus group with local health councils, most participants distanced themselves, and manifested a critical position regarding informal grassroots organisations in the territory that do not use institutional channels for addressing their demands. In particular, they criticised the disruptive, violent, and direct-action strategies employed by social movements in the territory, especially during the mobilisations in Huasco and Freirina in 2012, as described in Chapter 3:

We do not want to confront authorities. Maybe this makes us weak, and does not allow us to take to the streets, because we are afraid. We want dialogue, but if they [government authorities] do not accept to dialogue, we are not going to do anything about it. (Local health council focus group OI).

I do not support them [street protests]. I think that this is not the way things should be done. There must be other ways. These should be channelled through the government, through deputies and senators that are in charge of health and environmental commissions. However, here in our Valley... deputies and senators never come, and we do not know what they do. But it is to them we should put pressure for things to be channelled, because if things are not [channelled] through legal means, then they have no weight. For me, they would have no weight. One can kick, shout, one can maintain a roadblock for many days, but who listens? What do we get in return? (Local health council participant 1).

As it can be inferred from these interview extracts, some participants of local health councils in Huasco also acknowledge the limits of current government institutions for the channelling of their health demands. Some of these critiques, most of them articulated during informal conversations, related to the merely consultative and non-binding character of local health councils and other formal community associations; the yearly repetition of highly publicised health participatory assessments without any tangible impact; and the lack of responses from government authorities upon direct request from local organised communities. The tension that emerges from this perceived contradiction within local health councils, i.e., to persevere on institutional mechanisms for participation, while at the same time to acknowledge the indifference of current democratic institutions for solving health demands, manifested only occasionally during open conversations, yet remained mostly constrained to private conversations outside public discussion. On one occasion, this debate emerged among participants in one of the focus groups, which I transcribe entirely below. It also manifested physically among a small number of participants through signs of emotional distress when referring to their exhaustion and frustration of participatory spaces within government institutions:

Participant 01: What I think is unfair is that there needs to be a protest for people to be listened to. Not through the supposedly appropriate channels, but to confront authorities. I realise that everything, in the long term, if there is no confrontation, if there is no mobilisation, unfortunately brings no results, it only remains in little papers, in talks, and nothing else [...]. Because unfortunately we realised this when it occurred in Freirina, when people massively mobilized, very consciously, and they took to the streets. Such a small community, few people did something so big, and that leaves us a very important lesson!

Participant 02: And what about the consequences? They were left with no jobs, and many people remained complaining. How many people invested there, and they were left with no jobs! That was the only opportunity [referring to the agroindustry] they had to move forward [...]. That is why I wonder, how we could not dialogue, or get to an instance where they [the agroindustry] could improve? [...] If we are going to burn trucks, to block the road, to cut trees, to burn houses, to burn cars, then it is not fair. Why did people from Huasco have to pay for the consequences of what happened in Freirina? They did not let us drive through [during the roadblocks]. It is ok that you fight for something, but this must be legal...

Participant 01: But through the legal channels, you do not attain anything.

Participant 03: You do not attain anything [silence]. (Local health council focus group 1).

It is very disappointing the way things are done. They [government authorities] organize two, three dialogues, many people attend and participate, we are assigned for group work, we see the problems, and we make suggestions... An impeccable work. However, the next year, they come again, and we do the same, and no one complains asking why this happens. Sometimes they [government authorities] do not even give the minutes nor the documents of what was discussed. (Local health council participant 1).

Once we wrote a complaint, we sent it to them [government authorities]. We never received any response. Around three years later, they [government authorities] came up with the idea that we had to constitute a formal directive board, with legal personality [...]. I said no, and I resigned. These instances are merely consultative, they are powerless. Nothing that we discuss will be really studied, or considered, or solved [...]. Therefore, I believe they [government authorities] make these things for people to say: yes, we are participating. However, what is the point of participation if it is non-binding? (Local health council participant 3).

In contrast to the large majority of participants in local health councils, who distanced themselves from informal organisations in the territory, a small number of members during the interviews and informal conversations expressed their esteem to these community organisations, such as *Brigada SOS Huasco* and *Asamblea de Freirina*. Some of these members also reported to have occasionally met with them, on a personal basis, and have participated in their activities, as I could observe during my fieldwork. From the narratives of these participants of local health councils, they highlighted *Brigada SOS Huasco*'s "good disposition" to invite people to their meetings and community workshops (local health council participant 2), the courage of its members, and their "lifelong commitment" to the protection of their health and the environment (local health council participant 4). One of the interviewees expressed: "I hope they never withdraw, because they are Huasco's salvation. If today Huasco is at the top of environmental discussions it is because of them" (local health council participant 2). Similarly, after one of the largest protests in Huasco against the visit of the Minister of Environment in April 2017, as I will describe in more detail in the next chapter, some local health council members coincided in expressing their joy, gratitude, and support to this protest:

To be honest with you, I felt it was an explosion of frustration, of exhaustion, of seeing that nothing improves here. Corruption is everywhere, and this [problem] is part of the corruption between government authorities and local industries, while people have no weight. Even though I do not agree with them in many things, [mostly] regarding their political tendencies, they are the only ones that have struggled for the environment [in Huasco]. The rest of us are all passive beings. (Local health council participant 4).

Do you know what I felt? I felt happiness. I want to be with them, to fight with them, and I will do this. As soon as I leave this organisation [local health council], I will join them no matter how. Maybe I will be at the frontline with them. I cannot wait! [...]. I could identify myself with them, because I have grandchildren, and I do not want them to suffer the consequences [of environmental pollution]. It is because of my grandchildren that I will join them. Maybe I will not be able to throw stones [laughs], but I will be there. Let us hope they accept this old woman [laughs]. (Local health council participant 5).

"Our work is for the users to have better health care"

In the district of Huasco, local health councils addressed many health problems that affect their communities. Among the most important for them were the lack of medical specialists in the province and region (regional civil society council meeting); childhood obesity and cardiovascular diseases in adults (Consejo de Desarrollo Local de Salud, 2017); dementia and dependency among elderly population (local health council focus group 1); and the construction of the new hospital in Huasco, which has been postponed repeatedly to this day since 2007 (local health council focus group 2). Local health councils often discussed these problems in the context of annual participatory health appraisals, providing to health workers the community's perception of most pressing health issues in the territory. Since 2016, the local health council in the primary health care centre is also responsible for the formulation and implementation of a local participatory health programme, according to the Healthy Cities, Municipalities, and Communities strategy, as explained in Chapter 3 (Ministerio de Salud, 2015b). For the three-year period from 2016 to 2018, the local health council prioritised childhood obesity and overweight as the most important health problem in Huasco, and included several activities proposed by its members to address this issue (Consejo de Desarrollo Local de Salud, 2017).

From their group discussions, interviews, and documental revision, I observed that local health council participants approached their collective health problems mainly from a biomedical and individual perspective, often detached from broader social, economic, and environmental conditions. During my participation in the regional civil society council meeting in March 2017, discussions about the reasons behind the lack of medical specialists in Atacama region mainly revolved around individual responsibility of people for not attending to their health care appointments, and for not providing reliable contact information to health services, leading to the inefficiency in the allocation of medical care. During these discussions, local health council

participants did not mention the financial restrictions of public health institutions, the gradual privatisation of health care services in the last three decades, nor the unequal distribution of health workers in the country, particularly medical specialists (regional civil society council meeting). In a later interview with one of the participants, I asked her about this, and she replied that it is not that members of local health councils ignore this, but they must reduce these discussions in order to be more efficient, considering that in these meetings neither they nor government authorities could address these broader causes:

They [local health councils] always try to avoid these [discussions] because in the long term they say that local health council's decisions are not binding. Therefore, that is the most important problem. They take our problems, they take pictures, they get the problem, and then they do not do anything with these. It is like a citizen pacification [...]. Once, when I talked about it [deficit of medical specialists], one person, from another local health council, said to me: you know what? You will not achieve anything through the regional health service; they will not solve this. (Local health council participant 2).

Similarly, in the more recent formulation of the local participatory health programme in the primary health care centre in Huasco, the local health council prioritised childhood obesity as the most important health problem in their community, as mentioned above (Consejo de Desarrollo Local de Salud, 2017). They identified that the underlying causes of childhood obesity were the lack of knowledge on dietary habits, lack of family communication, lack of physical activity, increased use of technology, and genetic factors (Consejo de Desarrollo Local de Salud, 2017). Consequently, their proposed objectives were "correcting bad dietary habits in children under 6 years old", considering "parent's low motivation" and "family refusal to modify their dietary habits", and "family's lack of adherence to health centre's activities" (Consejo de Desarrollo Local de Salud, 2017, p. 5). Accordingly, they proposed behavioural and top-down interventions among local communities as main health strategies, including informative talks and citizens' dialogues organised by health workers for addressing this problem (Consejo de Desarrollo Local de Salud, 2017). They also incorporated intersectoral strategies including the procurement of sport equipment for local primary schools, and the proposal for the drafting of a municipal ordinance for regulating food sales near schools. However, these strategies did not seem to be entirely derived from their participatory health assessment (Consejo de Desarrollo Local de Salud, 2017).

In addition to the role of local health councils in the formulation of participatory health assessments in Huasco, these community organisations also applied for external funds for

infrastructure projects in their respective health centres (local health council focus groups I and 2). In 2014, one of the local health councils made it possible to acquire two washing machines and one drying machine for the community hospital, donated by *Guacolda* thermoelectric plant, after months of not having this essential equipment for the normal functioning of the health centre (local health council 02). In 2012, one of the local health councils was awarded the project *Favoreciendo la Infancia* (Promoting childhood, in English), which consisted in the implementation of a sensory room for promoting children's neurodevelopment in the primary health care centre in Huasco (Fondo Avanza, 2013). In 2015, the same local health council was awarded the project for improving the infrastructure of the rural health centre in Huasco Bajo (Fondo de Inversión Social, 2015). Both projects were funded by Barrick, owners of *Pascua Lama* project in the province of Huasco (Fondo Avanza, 2013; Fondo de Inversión Social, 2015). More recently, one of the local health councils was awarded a project for the improvement of the main entrance of the primary health care centre, funded by Fundación AES Gener, which is part of *Guacolda* thermoelectric plant (Fundación AES Gener, 2018).



Figure 9: Sensory room for promoting children's neurodevelopment in one of the health centres in Huasco. Reprinted with permission from the respective local health council.

For participants in local health councils in the district of Huasco, these spaces were highly valued. According to their narratives, local health councils provided a communication channel between local communities, health workers, and regional health authorities in order to improve people's health care and patient's satisfaction (local health council focus group 1, local health

council participants 1 and 2). They also manifested their role as supervisors of health workers, ensuring that "no one be discriminated, because sometimes patients are badly treated", and "to assure that health workers get to good terms with people, especially the elderly" (local health council focus group 1). Similarly, and considering the economic and material limitations of health centres in the district of Huasco, members of these spaces for participation also valued their collaboration with health workers for raising additional external funding for the improvement of health infrastructure and clinical implementation (local health council focus groups 1 and 2). In this regard, local health councils in Huasco seemed to improve health care attention among local communities, at least in the short-term and for specific health issues:

Local health council represents citizen's perspective to improve health care attention. And it is reciprocal, because if the CESFAM requires something, not too big, but small things, we can collaborate with them. We are the community rapprochement to the health centre. Having a community group in the health centre is important. People know that they are protected under all circumstances, they know that they would have somewhere to go if something happens. It is important, and people appreciate this labour. (Local health council participant 2).

We apply for projects; we win projects for our users to have a better infrastructure for health care attention. Because we belong to the municipality, we do not have many resources [...]. That is what we do, our work is for the users to have better health care, and we buy many things: an electrocardiogram, one of those things for measuring the blood pressure, for measuring oxygenation, things like that. (Local health council focus group 1).

We seek for people's needs to solve them. For example, people should not have problems when they need to take their medicines, like the elderly who have a pillbox to remember when they need to take their medicines. Or when they have a health care appointment, they do not need to be waiting all morning. There is a place for them, so they do not need to be outside. All these things we deal in the local health council. (Local health council focus group 1).

"If participation were not a health-related goal, no one would care about it"

Local health councils in the community hospital and in the primary health care centre in Huasco are coordinated by social workers, and with occasional participation of other professionals from these health centres, including nutritionists, physiotherapists, and nurses (health workers 3, 5, and 6). There are also provincial and regional health authorities responsible

for both the participation of citizens within health care centres and the coordination of the provincial and regional civil society councils within the Regional Health Service in Atacama, and the Regional Subsecretary of the Ministry of Health (regional health authorities 1 and 2). Provincial health authorities are based in Vallenar, and regional health authorities are based in Copiapó, the capital city of Atacama region. At the national level, there are also health authorities responsible for community participation in the public health sector, based in the Department of Health Promotion and Community Participation, in the Ministry of Health, in Santiago de Chile (regional health authorities 2 and 3).

In general, regional health authorities and health workers directly involved in local health councils clearly articulated the importance of collective participation within health centres in the region, arguing for their role for improving the efficiency of local health programmes, for the right of people to participate in public institutions (regional health authorities 1, 2 and 4), and for implementing health promotion strategies (regional health authorities 1 and 4). As reported in the interviews, regional health authorities, and local health workers recognised the sustained progress in the implementation of spaces for citizen participation in the health sector, and the advancement of several legal regulations that assure the maintenance of these participatory spaces within public health centres. They also described the existence of a "common language" (regional health authority 1) of participation and community work among health workers due to the development of training programmes on family and community health, and the sustained incorporation of social workers, psychologists, and educators within the health centres in the last decade (regional health authorities 01, 02, and 03). However, and despite the gradual extension of collective participation in health among public health institutions, all interviewees acknowledged that the practical implementation of these participatory spaces is far from what is expected:

No one would ever think today of not having a local health council in their health centres, something that in previous years was very difficult. Today it is part of the language, is part of everyday activities, and is part of their [health workers] responsibilities. However, I think that we are lacking the phase of deepening community work and social participation. (Regional health authority 1).

We need to recognise that there are important improvements. Today health workers have a language, at least in our region [of Atacama], a language about participation. It is not unfamiliar for them [health workers] to speak about communities, about participation, about local health councils. They have incorporated it. (Regional health authority 2).

Regional health authorities described in more detail some of the structural limits of collective participation within health centres, and coincided in pointing out its merely formal and symbolic character. Some of them considered that collective participation, as currently practised, does not involve devolution of political power from government authorities to local communities, despite the rhetorical emphasis on collective empowerment that can be found in official documents (regional health authorities I and 3). For most of them, collective participation in health was implemented at its most basic level. This focused on providing information and consultations to local communities as a legal requirement for transparency within public administration and in the context of state modernisation (regional health authority 3). In this sense, they acknowledged that spaces for citizen participation in general "do not produce significant changes nor put pressure on the government" (regional health authority 2), but frequently resulted in the containment of social discomfort and health demands. Some of them also considered that occasionally, when collective participation goes further than expected, health workers perceive it as a "nuisance" (regional health authorities 02 and 03), and as a "threat" to their daily professional activities and technical authority (regional health authority 3):

There is a political will to show participation. Nevertheless, this is to a limited extent, and it is instrumental, i.e., the Chilean state involves citizens in public administration, as everyone recommends, including the World Bank. However, it is a merely formal type of participation, and in practice, there is no delegated power to citizenship. There is not. The state is not open to more participation. (Regional health authority 3).

When community begins to complain more, when they begin to empower themselves, health workers become uncomfortable. Because health workers are not prepared for conflict. Because they are not prepared for community participation. And health workers see this as a nuisance. Therefore, when communities begin to organize, they [health workers] are easily surpassed, and they see them as a threat, because they call into question their professional activity. (Regional health authority 4).

Sometimes participation, when it is really 'participative', it is a nuisance for public administration. We can talk a lot that we are open to listen, but later, health workers say: Hey, why should this person come and determine what I do? Many health authorities in the health service speak a lot about participation, but later, when it is time to act, they do not have this perspective. I think that these spaces are often like buffers [...] because they can really help you to lower the pressure on some topics. However, in the end, these do not produce significant changes nor put pressure to government. (Regional health authority 2).

Although it is safe to say that most of these interviewees were critical of the implementation of participatory spaces within health centres in the territory, I had one informal conversation with another regional health authority, which was not included in the dataset because of her refusal to be voice recorded for this research. Her perception differed from that of her colleagues in the sense that for her, participation within health centres was "participative enough", and local health councils in the province of Huasco were already very democratic "because people vote" (field note II). She also noted that the explicitly non-binding aspect of local health councils was merely a formal problem, since what was important was to consider the opinion of local communities, as was the case in the territory. She justified her position referring to the limited resources of health centres in the province of Huasco, and that if these spaces for participation could emit binding commitments, there would not be enough economic resources to provide communities with everything they would request, such as "medical specialist, waiting lists, and ambulances" (field note II).

Similarly, for regional health authorities and local health workers, one of the most important problems for the implementation of collective participation in health was the limited economic resources for public health institutions in the region and the country in general, as explained in Chapter 3. From their interviews and informal conversations, they expressed that health workers within primary health care centres and community hospitals were overworked, and most of their activities were described as "asistencialistas", meaning a short-term, cosmetic, and external assistance from government institutions to vulnerable communities (regional health authorities 01, 02, and 03). Accordingly, it was difficult for them to implement more meaningful and long-term actions, such as health promotion strategies, and participatory practices with local communities, beyond the minimum required by law. They referred to problems such as working overtime and a lack of flexibility, a prerequisite for effective engagement with local communities outside health centres. Furthermore, health workers that coordinate local health councils in each health centre in the district of Huasco also recognised that their efforts for attaining this goal, which relates to a collective economic incentive, implied that they cannot address other activities on health promotion and community participation that are not associated to any measurable health-related goal:

Primary health care centres are under a lot of pressure because health-related goals are mainly curative, goals that need to be fulfilled, that many times are associated with [economic] resources, such as benefits for health workers or for local municipalities. It is also a burden that does not allow, from my perspective, the establishment of these community processes as they should. (Regional health authority 1).

We see it [community participation] as a health-related goal. It is a goal for our health centre to have a local health council. Nevertheless, if participation were not a health-related goal, no one would care about it. No one would care for people to have an opinion about the health centre. We do it because it is a health-related goal. That is the way things are [...]. If we fulfil this health-related goal, we receive more money. If it were not a health goal, maybe we would not even care about social participation in the health sector. (Health worker 4).

During the interviews, regional health authorities and many health workers, also described the difficulties related to the formal assessment of participatory processes within health care centres in the territory (regional health authorities 02 and 03). The formal evaluation of community participation in health within regional primary health care centres required only to assess if a participatory plan exists or not, and did not include any evaluation of the content nor the quality of the report that could redirect local participatory practices (regional health authorities I and 2). In this regard, one of the interviewees acknowledged that sometimes she received participatory reports of "questionable quality" from local health councils' coordinators (regional health authority 2), but she could only asses if the participatory plan was formulated or not, according to the law 19,813 (Ministerio de Salud, 2007a), as described in Chapter 3. The difficulties of formal assessment of participation also related to the over-utilisation of pictures, participants' lists, and meeting minutes as the main evaluation and registry methods (regional health authorities 1 and 2). Moreover, they recognised that a proper evaluation of community participation within health centres would require time and special training among local health workers. According to them, evaluation of participation is not part of their training in community work and family health care attention. For others, however, it constitutes an essential tool for improving their practice (regional health authorities 1, 2 and 3):

In the health sector we work with goals, budgets and deadlines [...]. Often, the processes required for community participation are not respected. At the beginning, you require a reconnaissance, to establish trust, to assess the territory, and to prioritise problems. But because we have goals to achieve and deadlines to meet, often we do not have the space for all these processes to be done effectively. Many times, what we do is to hasten these processes, or to never conclude a process at all. And [what we usually demand] are verifiers, I mean, it is more important to us to hold a meeting, to have the meeting minutes, to take pictures, than to have the deeper process that participation requires. (Regional health authority 1).

Health workers that were directly in charge of local health councils and community participation in general, often manifested their increased workload and multiple responsibilities

outside participatory and community activities. They stated that they did not have enough support for working with local communities from other health workers or other government authorities (health workers 4, 5 and 7). They described that other health workers "run away" (health worker 5) when they are invited to work with local communities, beyond their routine clinical responsibilities. Since "health goes beyond caring for people with a stomach ache, or chronic diseases" (regional health authority 2), the interviewees also pointed out that the rest of health workers and municipal authorities needed a broader understanding of health, because of their frequent association of health only with the presence of disease. Additionally, health workers that coordinated local health councils within each health centre often expressed a need to work for longer, and after working hours, in order to fulfil their commitments with local health councils, and for establishing rapport and a trusting relationship with local communities:

I do not have time allocated for community work, and I also have other clinical responsibilities. The work overload I have is huge. I do not have allocated 22 hours per week, as it is suggested [...]. Even more in Huasco, where there is only one professional [per area]. And the rest of the health workers do not care about this. (Health worker 5).

Participation from other health workers is very poor. Everyone runs away. People prefer not to be involved in problems. It is very hard for them to participate, because they do not dare to speak the way things are, no one dares [...]. And they are self-indulgent: I don't want to participate, I comply with my working hours and that's it, I go home. You set up a meeting for citizen participation and no one would go, everybody runs away. (Health worker 7).

We have been trying for three years to allow those professionals that work with communities in the health centres to have the possibility to have flexible working hours, because in order for them to connect with their communities, they must have a different schedule. But we have not received any response for this request [from municipal authorities], and I do not see too much willingness from health directors [to do this]. (Regional health authority 2).

Regional health authorities and health workers also pointed out what they consider the instrumental character of participation within health centres in the district of Huasco and the entire region. For them, instrumentalisation referred both to the emphasis of working with local communities to fulfil a health-related goal, as explained above (regional health authorities 2; health workers 4 and 5), and to have the possibility to apply for external funds and receive additional resources for their health activities (regional health authority 1; health workers 5 and 7). Some of them also included, within the notion of instrumentalisation, the requirement of relatively structured participatory activities and programmes from regional and national health

authorities (regional health authority 1; health workers 1 and 5). These requirements, they argued, gave little space for them to work on local demands, but redirected most of their efforts to fulfil government agenda on health and participation. An example of the preceding was the requirement from national health authorities to address healthy nutrition and to promote physical activity as the main elements of the National Health Promotion Plan, despite the context of environmental pollution in Huasco (regional health authorities 4 and 5). Another example mentioned by one of the interviewees was the enforcement of disseminating health information among communities regarding some predetermined health problems:

I think that there is an instrumentalisation [of local health councils]. I think that the person in charge of participation that does not recognise this instrumentalisation, that really exists, is wrong. Look, to begin with, every annual plan is very structured. There are topics that you need to address. So, when someone imposes a theme, he is already instrumentalising it to fulfil this requirement from the [regional] health service. Because you need to fulfil this, or else, there would be a reduction in economic resources, and all the consequences associated to its nonfulfilment. (Health worker 5).

Here the [health] professional is the one that advises the local health council about which fund they should apply to, what project to develop. For example, if I need something, like an extended reception room, or if I need some sort of repair, I can apply through the local health council. I can suggest it to them, and they see if they think it is necessary, or they prioritise another project from another professional. (Health worker 2).

"Most of our families work in [the industries]. That is why people do not talk"

Members of local health councils and health workers did not include in their work the problem of environmental pollution, despite their evident recognition of it as a health problem in the territory. In 2016, the annual participatory assessment in the primary health care centre stated that there are "historically [environmental] problems in the district of Huasco, and despite people's discontent, and many social mobilisations, these have not been completely eradicated, but instead they [government authorities] have provided mitigation measures that are not positively perceived by its inhabitants" (Consejo de Desarrollo Local de Salud, 2016, p. 33). Moreover, they stated that environmental pollution "is a problem that affects the entire district of Huasco, and is produced by two industries that systematically pollute the air, water, and the

land" (Consejo de Desarrollo Local de Salud, 2016, p. 34). In the participatory health assessment in 2017, the magnitude of environmental pollution received the second highest rank among different health problems, behind childhood obesity (Consejo de Desarrollo Local de Salud, 2017). Similarly, in November 2016, the Regional Secretary of the Ministry of Health in Atacama presented an environmental map of Atacama, acknowledging that the region is facing severe environmental problems derived from pollutant industries (Secretaría Regional Ministerial de Salud de Atacama, 2016).

From the perspective of members of local health councils, the silence on environmental pollution as a health problem in the territory was mainly related to the general economic dependency of people on these provincial industries, and their fear of economic consequences if demands for environmental protection affect industrial activities (local health council o2; local health council participants 1 and 2). A member of a local health council that also participated in the Programme for Environmental and Social Recovery of Huasco (PRAS), which will be addressed in detail in Chapter 8, mentioned that she had to justify her participation in the PRAS, and to explain to the rest of the members of the local health council that this programme was "not for the industries to shut down", but merely to comply with existing environmental regulations (local health council participant 2). As described above, they were also afraid of losing jobs during the agroindustrial conflict in Freirina in 2012 (local health council focus group 1). Frequently, elderly members of the community recalled the existence of black lists and threats of unemployment from one of the main local industries if they were caught participating in socioenvironmental demonstrations (local health council focus group 2014; local health council participants 1 and 2):

There are people that work in the industries and they must support them, otherwise, those that want to get involved with the socioenvironmental people, soon will be fired [...]. They are fired, of course! If I were protesting, or if I am organising against the industry it is like being against the industry that is providing me sustenance. Therefore, I have people that say to me: now you complain! But before I could not. Maybe you can say that I am a coward, but you also need to care for your family, and I need to live. (Local health council participant I).

Elderly people were raised with the myth of the black list. And when you spoke bad about the company, if the company caught you, you were placed on the black list, and no one from your family could get a job in the company. So, people that participate [in local health councils in Huasco] are that type of people. (Local health council participant 3).

Another difficulty for addressing environmental pollution is job positions. People here are quiet because most of our husbands and sons work there. Most of our families work in the [iron] pelletizer plant and in the thermoelectric plant. That is why people do not talk and stay quiet. All would lose their jobs. My husband was banned for a whole year because, according to the industry, he participated in a protest at the entrance of Huasco when they protested against Punta Alcalde. One year banned, one year punished. (Local health council focus group, 2014).

Private funding from provincial industries to health care centres in the district of Huasco seems to be significant based on interviews and document revisions, in particular for health promotion activities, health infrastructure, and dental health. For example, CAP Minería contributed to a third of the total costs of construction and implementation of the new primary health care centre building in 2011 in Huasco ("Inauguran moderna infraestructura del consultorio Juan Verdaguer", 2011). Since 2011, Fundación AES Gener, which is part of Guacolda thermoelectric plant, has provided dental care for 916 schoolchildren between 7 and 13 years in Huasco. Similarly, since 2016, Fundación AES Gener funds Sonrisas en Huasco programme for dental health promotion and tooth decay prevention for children under 7 years old, their parents, and their primary school teachers (Fundación AES Gener, 2018). In 2014, Nueva Unión project, property of the Canadian company Goldcorp, inaugurated the provincial network for health promotion, which included the municipalities of Alto del Carmen, Vallenar, and Huasco ("Red provincial de promoción de salud lanza concurso fotográfico", 2014). These private funds from provincial industries to health centres in Huasco constituted a controversial topic among members of local health councils, health workers, and health authorities. Despite being aware of the negative consequences provincial industries pose for environmental health, specifically referring to CAP Minería and Guacolda thermoelectric plant, many of the interviewees recognised the need for more economic resources in order to improve people's health:

The industry, through the corporate social responsibility, provide resources to communities, and communities see this as an opportunity, because there are many problems that are not being addressed in any way. So, the industry comes with five hundred thousand pesos, or competitive funds where the community can apply and eventually provide a solution to these necessities. And they do it, despite knowing that the industry is polluting the environment. It happened to us. The projects that we could implement as a local health council were funded by local industries, by Barrick. Despite the fact that I did not agree, there was a position from the health council that I could not ignore [...] Many in the local health council said to me: let's apply, it does not matter that it is a pollutant industry. (Health worker 5).

Look, I think that it is not a bad thing, per se, the industrial corporate social responsibility. In fact, we, as the health sector, should seek more funds from these industries [...]. Because these are industries that are somehow affecting the environment, they are creating difficulties. Many of them have to do with health. (Regional health authority 2).

Unfortunately, those industries that are polluting the environment are the same that provide municipal resources [...]. These pollutant industries are those that have a social support office. When patients need to buy an expensive medication, and we cannot provide it, where do we ask for the money? There! If we cannot provide it, they can (Health worker 4).

Another element I observed during my interviews, which could be associated with the lack of discussions and activities related to environmental pollution within local health councils, and more broadly, within health centres in Huasco, was the predominance of a biomedical perspective on health. This was prominent not only among local health council participants, as argued above, but also among local health workers in both, the community hospital, and the primary health care centre. In contrast to regional health authorities, who visibly understood and articulated the problem of environmental pollution as a health problem, most health workers interviewed did not perceive environmental health as part of their responsibilities. In this regard, many health workers often articulated health problems in the territory from an individualistic and biomedical perspective, focusing on disease treatment, curative health-related goals, and the subsequent fragmentation of health programmes, as mentioned in the previous section. This contrasted with their rhetorical insistence on the family and community health care model (Ministerio de Salud, 2008b), and the emphasis placed on social determinants of health within the National Health Promotion Plan (Ministerio de Salud, 2015b):

For rural communities [in the region], the environmental problem is one of their priorities. They are more aware of environmental pollution than us. People from these communities, and within the participatory spaces of health centres, consider environmental pollution as a priority, and consider it more linked to health than the health teams do. Health teams say that the garbage problem needs to be addressed elsewhere, and the environmental pollution is the responsibility of mining industries, and we cannot do anything about it. (Regional health authority 1).

Every year people demand to address problems that are not traditionally considered as health priorities, and environmental problems are a clear example of a theme that often emerges in health appraisals. But in the end, these are not considered national priorities, because the national priority involves responding to the published health guarantees, especially obesity. (Regional health authority 3).

We have so much work to do. As primary health care workers, we must fulfil health targets, and those areas that are not associated to our health goals such as environmental pollution [we do not address them]. We are not evaluated on things outside our preassigned goals. There is no target related to environmental health, nor environmental education to local communities. Therefore, we do not do this. We have many other health targets to fulfil. (Health worker 2).

The predominance of a biomedical perspective on health among health workers in the district of Huasco was also reinforced by their lack of training on environmental health. In this regard, and despite international calls for the involvement of local health workers in the subject, as explained in Chapter 1, official documents of the Ministry of Health reduce health workers' involvement to "protect people's health in existing environmental conditions" (Ministerio de Salud, 2011, p. 228). Consequently, regional and national health authorities recognise that "the environmental topic is unknown to primary health care workers [...], very basic things are unfamiliar because there has not been the possibility to train them" (regional health authority 5). Similarly, regional health authorities argued that health workers "cannot address this topic, then they cannot promote it, because it would get out of their hands, and they do not have the resources to cope with it, to continue, to intervene" (regional health authority 2).

I think that for health workers today, at least within primary health care in this region, [environmental pollution] is not in their priorities, and they still do not consider it linked to health. Still they think that this must be addressed by another public institution, others must deal with this. So, they do not use these participative spaces to address these themes [...]. But I absolutely agree in that there is so much to do in environmental health within primary health care, and we are responsible for that [...]. For us, it is easier to organise an activity regarding physical activity, or healthy food, to prevent cardiovascular diseases [...]. (Regional health authority 2).

Aware of this problem, since October 2014, regional health authorities have designed and implemented an unprecedented training programme for environmental health for primary health care workers in the region. This was in the context of the drafting of the environmental map of the territory (Secretaría Regional Ministerial de Salud de Atacama, 2016), and the study of heavy metals among children in the region by the Department of Public Health at the Regional Secretary of the Ministry of Health in Atacama (Ministerio de Salud, 2015a). This programme, named Environmental Epidemiology and Toxicology Workshop, consisted of a two-day workshop for primary health workers in the region, aimed to "improve health professionals' capacity for addressing health issues related to environmental pollution"

(Regional Health Authority, personal communication, April 2017). However, lack of interest and high turnover among health workers have limited its impact (regional health authority 5). In a more recent personal communication, a member of the Regional Secretariat of the Ministry of Health in Atacama informed me that the seminars continue, but "because of lack of resources, we had to reduce them and to associate it to other non-environmental topics" (Regional Health Authority, personal communication, July 2018).

We repeated it in 2015, with some level of deception. Teams changed, so we realised this seminar needs to be done every year because there is high turnover. They are not the same medics, nor the same nurses, nor the same nutritionists. We presented this theme and it was something completely new for them. So, if we want to work on the environmental issue in primary health care, we need to persist in summoning them, in explaining the environmental map, and telling them the importance of this. (Regional health authority 5).

Finally, I observed that the use of supposedly neutral participatory techniques posed serious difficulties for members of local health councils and health workers for addressing the environmental health problem. Even though local health councils would constitute the most appropriate spaces for addressing perceived health needs among communities (Ministerio de Salud, 2008b), the participatory techniques employed for working with community organisations prompted a decontextualized understanding of local health problems. Examples of these participatory tools included needs prioritization, the design of a bio-map, and brainstorming. According to the prioritization matrix used by health workers for needs prioritization, local populations' health needs are prioritised considering four factors: a) its magnitude, referring to how many people are affected, b) the impact on people's health, c) feasibility of solving the problem, and d) its economic and political viability (Consejo de Desarrollo Local de Salud, 2016). Subsequently, any problem that is relatively difficult to solve received a lower rank, including environmental pollution. Specifically, in the more recent health participatory assessment in the primary health care centre in Huasco (Consejo de Desarrollo Local de Salud, 2017), environmental pollution received a high rating in its magnitude and impact, yet one of the lowest in viability, resulting in a relatively low overall ranking. Consequently, through this participatory technique, local health council's involvement on broader issues was severely limited.

Another example of how participatory techniques used by health workers in Huasco could prevent local communities from addressing broader health problems, such as environmental pollution, was the sketching of a bio-map. A bio-map consists of a participatory technique

"that allows to know, from a territorial and ecological perspective, people's habitat, relations and interactions in their context" (Consejo de Desarrollo Local de Salud, 2016, p. 8). It permits participants to visualize and discuss their health needs, problems, and risk factors associated to their territory. In the participatory health assessment in 2016 (Consejo de Desarrollo Local de Salud, 2016), the professional responsible of the local health council placed Huasco in a rectangle where pollutant industries were left outside, and hence out of the picture, as shown in Figure 10. Therefore, members of local health councils recognised as environmental risk factors: lack green areas, illegal settlements, traffic accidents, illegal burning of garbage, insufficient street lights, problems in transportation, and environmental pollution was restricted only to the surroundings of the railway line (Consejo de Desarrollo Local de Salud, 2016).

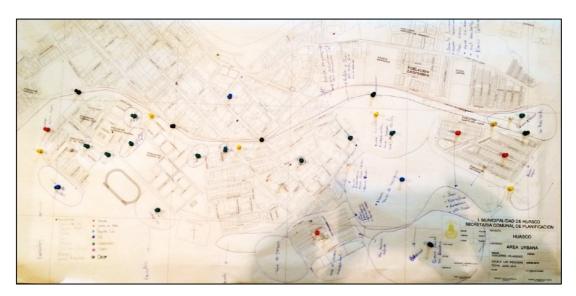


Figure 10: Eco-map prepared for the participatory health assessment in Huasco, 2016 (compare to Figure 5 which includes pollutant industries in the territory). Reprinted from *Diagnóstico participativo en salud* 2014–2016, by *Consejo de Desarrollo Local de Salud* (2016).

Chapter 6: Brigada SOS Huasco

In this chapter, I provide a description of *Brigada SOS Huasco*, a grassroots organisation in the district of Huasco, and one of the main organisations within *Movimiento Socioambiental del Valle del Huasco*. In the first section, I describe its main organizational characteristics, highlighting its informal and horizontal character. In the second and third sections, I address their demands and some of their strategies, which include disseminating environmental health information among their communities, and denouncing government authorities for their responsibility in the environmental situation of the region. In the fourth section, I provide an ethnographic account of one of the most important public activities in recent years held by *Brigada SOS Huasco*, which was the protest against the visit of the Minister of Environment to Huasco, to deliver his public annual account in April 2017. In the fifth section, I address how members of social movements perceive health workers in the territory. Furthermore, in the sixth section I explain what I refer to as democratization of scientific knowledge among local communities, one of the main characteristics of *Brigada SOS Huasco*. In the final section, I end by providing a balance of the achievements and shortcomings of *Brigada SOS Huasco* since its creation in 2010.

"We created a wonderful organisation!"

Brigada SOS Huasco is a community organisation in Huasco dedicated to the protection of collective health and the environment. It disseminates information about environmental health to local communities, and denouncements government authorities for what its members consider a negligent attitude regarding their health and their territory's environment. Although Brigada SOS Huasco was created around the year 2010, many of its participants and practices go back to the first collective efforts for the protection of their environment that emerged during the first years of democratic transition in the 1990s, mainly from local olive growers, as mentioned in Chapter 3 (Elgueta, 2013). What differentiates Brigada SOS Huasco from previous organisations in the territory is their emphasis on environmental health problems among the local population; their broader mobilisation base, which goes beyond former agricultural and fishermen's organisations; their horizontal and informal character; and their more direct-action strategies, compared to previous organisations that heavily depended on institutional channels for negotiating their demands. After seven years of uninterrupted work, Brigada SOS Huasco is

one of the most important and recognised grassroots organisations in Valle del Huasco, both at the regional and national level.

It was difficult to delineate the organizational structure of Brigada SOS Huasco, because of their lack of any directive board, their informal character, and the unclear limits among its members and other organisations. These included feminist organisations, artistic groups, and olive growers' organisations, among others. During my fieldwork observations, I estimated that a group of around 12 people actively worked in this organisation. This number, however, fluctuated depending on the frequency and nature of activities organized by Brigada SOS Huasco, such as their periodical meetings, community workshops, cultural events, and more recently, the weekly coordination of the radio programme Voces de la Asamblea, together with other socioenvironmental organisations in the territory. Members of this grassroots organisation included people with a wide age range, from children and teenagers to elderly people. From my observations, around two thirds of its members were women. They were primary school teachers, housewives, dockworkers, visual artists and musicians, students, and pensioners. In general, and from informal conversations with many of them, it is safe to say that they had sufficient income to live decently with their families. However, as most Chileans, they often expressed their concern about unexpected health expenditures, the high cost of education for their children, and the low pensions for the elderly.

Supporters of *Brigada SOS Huasco* that did not participate regularly in its activities, but shared most of their demands, were much more variable in number, relying heavily on political and environmental contingencies. According to participants' narratives and revision of documents, the number of supporters fluctuated between 2,000 people, as in the first March for Life in Huasco in October 2010 ("Pacífica marcha por la vida se llevó a cabo en Huasco", 2010), to around 30 people as I observed in attending community workshops during my fieldwork (environmental health community workshop, 2016; community dialogue on public health, 2017). Among members and supporters of *Brigada SOS Huasco* I could recognise an intermediate level of participation of around 8 people that, despite being actively involved in the organisation's activities, explicitly rejected any membership to the group. After many interviews and informal conversations, they manifested that it is very important for them to maintain their political autonomy, as individuals and as families, in a context of generalised distrust to any type of formal organisation. In this sense, *Brigada SOS Huasco* gave them an open space to be involved in socioenvironmental work, without requiring any formal responsibility, or a long-term political commitment to the group.

In this regard, members and supporters of *Brigada SOS Huasco* considered that the imprecise demarcation of the organisation, i.e., its diffuse borders with other grassroots organisations, the lack of any directive board, its informal character, and the different levels of participant involvement, corresponded to a valuable characteristic of the group. Most interviewees associated this way of organisation with the possibility of including people with different ideological and political positions in their activities, also emphasising their autonomy from any external political agenda. The latter is one of the recurring and shared concerns among its members and supporters, as argued above, in a context of gradual public delegitimation of government authorities and traditional political parties in the territory. Participants also coincided in pointing out that the open character of the organisational structure of *Brigada SOS Huasco* allowed them to conceive more horizontal and democratic ways of decision-making and task distribution among its members, and to prevent knowledge and power concentration in any person or any group within the organisation, as was the case in previous socioenvironmental organisations:

We are a horizontal organisation. We do not have any directive board; we do not have legal recognition. Here anyone can participate with us, and we have maintained this way during all these years. And we have been able to maintain [this organisation] because no one gives orders, no leader sells himself [herself] to the highest bidder, no leader asks for money. Here, everything we do is to fight for our lives and our health. (Social movement participant 1).

The good thing about SOS Huasco is that they invite the community, and you can join them with your own contributions, whatever you have: your beliefs, your values, your ideas. Well, I did that, to contribute with what I thought was important, and it was to read as much as I could read. (Social movement participant 2).

I believe one of the most important achievements [of Brigada SOS Huasco] is the capacity to work horizontally. Before that, any idea of organisation required to have board of directors and some people in charge. Now, naturally, we have learned that [it is possible to have a different organisation]. And we have survived, and for an organisation that has no stable funding, no legal personality, no president, and does not have the logic of most organisations, I believe it is an enormous achievement. (Social movement participant 14).

Brigada SOS Huasco is part of Movimiento Socioambiental del Valle del Huasco, a broader coordination platform that articulates different socioenvironmental organisations in the territory. This platform was created in 2012, as a result of previous experiences of collaboration and articulation among organisations in the province of Huasco. During my fieldwork, this

platform included Asamblea de Freirina, Asamblea por el Agua de Guasco Alto, in the district of Alto del Carmen, and Brigada SOS Huasco. In its origins, Movimiento Socioambiental del Valle del Huasco allowed the coordination of massive mobilisations in Freirina between May and December 2012; the organisation of successive marches for Life and Water in the territory; and the drafting of public statements regarding the position of local communities on environmental and health problems (Elgueta, 2013). More recently, this platform was responsible for coordinating the radio programme Voces de la Asamblea (Voices of the Assembly), and allowed the organisation of the protest against the visit of the Minister of Environment to Huasco in April 2017, as I describe in more detail below. Movimiento Socioambiental del Valle del Huasco also articulated socioenvironmental organisations from the territory with other communities throughout Chile that also face socioenvironmental problems such as Caimanes, Quintero-Puchuncaví, Coronel, Chiloé, and Aysén, among many others.

"Here, everything we do is to fight for our lives and our health"

Brigada SOS Huasco demands are mainly related to the defence of life, health, and the environment. In one of its first public statements, after the first March for Life in Huasco in October 2010, the organisation manifested "its decision to defend the constitutional right to live and develop in an environment free of pollution" (Brigada SOS Huasco, 2010). In 2014, addressing the ratification of Punta Alcalde project by the Council of Ministries, Brigada SOS Huasco reaffirmed this decision when they declared: "abandoned by the state, we take the defence of our right to life in our hands" (Movimiento Socioambiental del Valle del Huasco, 2014a). For members of Brigada SOS Huasco, and for other grassroots organisations in Valle del Huasco, concepts of health and life were indissociably related to their territory and the environment where communities live. Specifically, collective health was related to the protection of land, water, air, and sustainable economic development for the people in the province of Huasco, based on their traditional economic activities:

We are conscious that life can only prevail if we respect and care for what generates it: the land, water, and air [...]. We are aware that any economic project in our territory affects all the basin, that our valley is an interdependent ecosystem, i.e., if we affect one sector, it will negatively impact the entire valley. We are part of a fragile, unique, and fertile basin, and we will defend together to perpetuate life. (Movimiento Socioambiental del Valle del Huasco, 2014b).

If they pollute our seashore, if they saturate the air with deadly pollutants, if they dry our river for large mining projects to extract with no limits, then they are directly threatening our lives, and the life of our Valley, and our possibility to project ourselves in this territory, with our customs and traditions [...]. We will defend our territory and our right to health and life. (Movimiento Socioambiental del Valle del Huasco, 2014d).

The defence of their right to health and life, maintained by Brigada SOS Huasco, was also intimately linked to the experiences of health problems that its members perceived were associated with environmental pollution in the territory, as many epidemiological studies evidence (International Agency for Research on Cancer, 2016; Loomis et al., 2013; World Health Organization, 2016). These experiences affected many of its members and supporters, whether in their own bodies, within their families, or among close friends. Among these health problems, cancer occupied a central place in their narratives, representing a painful memory and a constant fear among participants (social movement focus group 1; social movement participant 13). It was also a main discursive element in their public activities, as one of their first catchphrases suggests: "Huasco dies of cancer" (Brigada SOS Huasco, 2011). Other health problems that were frequently mentioned among them were cardiovascular and respiratory diseases, neurodevelopment problems in children, and heavy metal pollution in the general population. According to many informal conversations, interviews and focus groups, these painful experiences usually initiated the interest and decision of its members, and some supporters, to participate in Brigada SOS Huasco, mainly when recognizing the collective and shared grievances of these health problems in the territory.

There is so much pain. Many people have died, so beautiful people, little children. So, we have too much pain, too much anger because they [government authorities and entrepreneurs] are deciding the day when you will die, when you will get sick [...]. We were tired of seeing so many people with cancer, dying, leaving their sons and daughters alone. It was a time of too much pain. So, this [*Brigada SOS Huasco*] was developing, and we were acquiring more strength, more awareness (Social movement focus group).

When my daughter was born, when she was 8 days old, she had a very violent bronchial obstruction. And it was so severe that I had to take her outside Huasco [...]. But I wasn't the only person taking her daughter outside Huasco because of health problems. In Santiago, I met with other mums [from Huasco], also taking their children to different respiratory specialists [...]. So, [some of us] started to attend seminars, to read documents, to research, to see what we could do [...]. It was a very difficult process, a long process where not many people got involved. (Social movement participant 2).

My direct relationship [with *Brigada SOS Huasco*] started when my brother got sick [...]. When he was diagnosed with cancer, we had to face the reality. And I gradually started to realise that getting sick in a poor community is a terrible tragedy. We had all the support; I feel that we were very accompanied through this process. But I also saw many people with no support, who did not have any company. And then I started to be conscious of this reality that affected my community. Then, my commitment began (Social movement participant 13).

Brigada SOS Huasco centres its activities in raising awareness of local communities on environmental health problems that affect the territory. During my fieldwork, I had the opportunity to observe and participate in a community workshop about environmental pollution and health, organised in the parish church of Huasco in October 2016. This activity gathered around 30 people from all Valle del Huasco, and included three environmental engineers from Valparaíso and Santiago that presented the themes of air and water pollution. These presentations were designed and discussed in cooperation with members of the organisation some days before the event.

In May 2017, *Brigada SOS Huasco* organised the first community dialogue on public health in Valle del Huasco, in the former Nicolás Naranjo hospital, in Vallenar (Figure 11). Around 40 people attended this dialogue, including people from local communities, representatives of the Regional Secretary of the Ministry of Health in Atacama, and some primary health care workers from all the province of Huasco. However, primary health care workers from the district of Huasco did not attend, despite being formally invited to this activity. Since this dialogue was one of my last activities in the territory, I did not have the opportunity to inquire among health care workers on the reasons for this. However, this situation would be consistent with health workers' narratives on their lack of time and interest in community activities outside their working hours, as suggested in Chapter 5, and further reaffirmed by participants. However, and according to the organisers of the event, this was the first time that primary health care workers from the province participated in one of *Brigada SOS Huasco*'s activities. On this occasion, members of this organisation invited me to participate, where I presented some preliminary findings of this research. The findings received useful comments and suggestions from participants to the event.

In this first community dialogue of public health in Valle del Huasco, one of the members of *Brigada SOS Huasco* presented an environmental health assessment for the entire province. She included in her exposition an updated systematisation of environmental health research in the territory, including an analysis of general mortality and specific mortalities of cancer and

cardiovascular diseases in the district of Huasco (Hadjez, 2016). She also included the results of an unpublished study about the prevalence of heavy metals in children in Atacama, conducted by the Regional Secretary of the Ministry of Health (Ministerio de Salud, 2015a). In addition, she revealed the results of a national study on the health impacts of coal-burning thermoelectric plants in people living in small cities, which comprised the district of Huasco, among other territories (Ruiz-Rudolph et al., 2016). Another participant from the *Asamblea por el Agua de Guasco Alto* presented about the recent events of arsenic, magnesium, aluminium, and iron pollution in Chollay river (one of the tributaries of El Tránsito river), and the destruction of glaciers caused by the activities of *Pascua Lama* project in the Andes Mountains. Both presentations gave rise to an extended and fruitful dialogue among participants, together with typical drinks and food from the province, addressing in a critical and honest way the role of health workers and their relation to mobilised communities in Valle del Huasco.

Brigada SOS Huasco also organised other activities with the purpose of raising awareness of environmental health problems among local population. As part of Movimiento Socioambiental del Valle del Huasco, and since April 2017, Brigada SOS Huasco coordinated the radio programme Voces de la Asamblea, which goes live on air once per week in a provincial radio. In this radio programme, representatives of different organisations talk about public health, environmental pollution, sustainable economic development, and socioenvironmental mobilisations in other territories in Chile. Members of Brigada SOS Huasco also painted murals depicting the protection of health, life, and the environment in Valle del Huasco. Among these, stand out two large murals painted in Huasco in 2013, as part of the campaign "let's save Huasco from another thermoelectric plant", during the period of evaluation and later approval of Punta Alcalde thermoelectric project. Another important mural painted at the eastern entrance of Freirina in 2014, commemorated two years of the Battle of Tatara, one of the most significant episodes in the recent environmental history in the territory, as explained in Chapter 3. In this latter mural, it is written "President Bachelet, revoke environmental authorisations for Pascua Lama, Agrosuper, and Punta Alcalde". They have also participated in documentaries, including Freirina Rebelde (Rebellious Freirina, Pasatafarei Records, 2013), Zonas de Sacrificio (Sacrifice Territories, Departamento de Prensa de Chilevisión, 2014), and Paraíso Infértil: un documental de mierda (Infertile Paradise: a documentary about shit, Barahona, 2014).

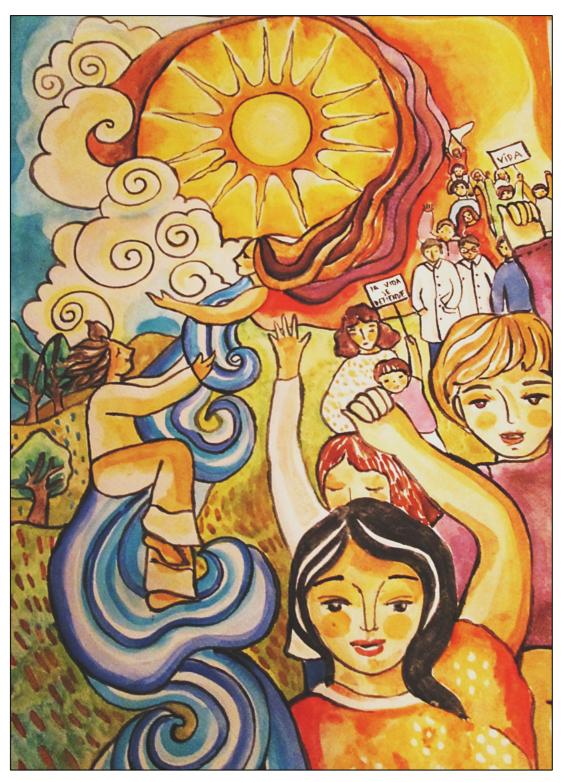


Figure 11: Poster for the first community dialogue on Public Health in Valle del Huasco held in the former Nicolás Naranjo hospital, Vallenar, on May 5, 2017. Reprinted with permission from its author, Pilar Triviño.

"They have the laws; we have the streets. Between dying or leaving, we choose to fight"

Another objective of *Brigada SOS Huasco* is to denounce what its members consider political authorities' responsibility in the adverse environmental outcomes of Valle del Huasco, for "abandoning their role of protecting the common good, and not complying with the fundamental duty of reassuring the wellbeing, health, and life of people" (Movimiento Socioambiental del Valle del Huasco, 2017a). In this regard, I recognised two central elements in this critique: their mistrust in traditional political institutions and participatory spaces for addressing their collective demands, and their open rejection to what they considered many acts of corruption and abuse of power from political authorities and regional entrepreneurs. According to interviews with members of other social movements in the province in Huasco, this position was not specific to *Brigada SOS Huasco*, but was extended to most grassroots organisations in Valle del Huasco (social movement participants 5, 11, and 12).

First, it is safe to say that all members of *Brigada SOS Huasco* whom I interviewed, mistrusted formal spaces for participation within government institutions. They justified this position after many years of approaching political authorities, and attempting to channel their demands through public institutions, with poor results. For example, they have written many letters to regional and national authorities (letter to Senator Isabel Allende, 2009; letter to President Michelle Bachelet, 2009, 2014; letter to Regional Intendent Ximena Matas, 2010; letter to Regional Intendent Jaime Prohens, 2012; letter to President Sebastián Piñera, 2010, 2012); they have participated in a public-private round table for improving the air quality in Huasco in 2009 and in the Programme for Environmental and Social Recovery of Huasco between 2015 and 2017 (social movement focus group); and they have expressed their opinion, and provided sound scientific evidence in multiple public consultations for environmental assessments for industrial projects in the province (social movement focus group). In their words, "we, the communities, have tried to make ourselves heard in the regular spaces and channels according to the law, in every possible instance, with same results: we are not heard" (Brigada SOS Huasco, 2010):

Little by little we understood how the state works. But we did not see this before. We always thought that authorities were there to support us. So, we addressed them, we wrote letters to them, we requested some things, we did everything in a nice way. But then, we realised that they bypassed us, they sent us back and forth, they sent us to talk here and there. Then, when

a new government came, they played dumb, and everything started all over again, from scratch. One round table, and after that another round table... So, we begin to understand how they deceived us. We did not understand that until we started educating ourselves. (Social movement participant 1).

Participants from Brigada SOS Huasco frequently recalled unfulfilled agreements with political authorities and industrial representatives, such as the lack of compliance of CAP Minería to the memorandum of agreement signed in 2005. According to this agreement, industrial representatives committed to cover the train wagons that transport iron ore to the iron pelletizer plant in Huasco, and to install an electrostatic precipitator for decreasing pollutant emissions (Movimiento Socioambiental del Valle del Huasco, 2012h). They remembered the failure in the formulation of the closure plan of Agrosuper plant in Freirina by the then Minister of Health Jaime Mañalich in May 2012, as described in Chapter 3 (Movimiento Socioambiental del Valle del Huasco, 2012a). Members of Brigada SOS Huasco also denounced the lack of transparency in the information provided by government institutions regarding environmental pollution in the territory. For example, they criticised the opacity of measurement of air quality in Huasco, since 10 out of 11 air monitoring stations are property of Guacolda thermoelectric plant and CAP Minería (Sistema de Información Nacional de Calidad del Aire, 2018). These industries do not provide publicly available and updated data, despite being legally required to do so (Ministerio de Salud, 2008a). I, myself, tried to ask for this data through a formal request to the Regional Subsecretary of the Ministry of Health on June 2017, who succinctly informed me that local industries, despite being obliged to inform public authorities about their measurements, have "stopped doing so since December 2012" (Regional Health Authority, personal communication, 2017).

Members of *Brigada SOS Huasco* also criticised the many irregularities associated with the approval of using petcoke as a fuel for *Guacolda* thermoelectric plant (Movimiento Socioambiental del Valle del Huasco, 2012h), and the delay in the process of declaring Huasco a latency zone for environmental pollution, as mentioned in Chapter 3 (Movimiento Socioambiental del Valle del Huasco, 2014a). They also denounced the irregular approval of *Punta Alcalde*, despite its technical rejection by the Regional Environmental Commission in Atacama (Movimiento Socioambiental del Valle del Huasco, 2017a, 2017b). Additionally, during my fieldwork, some members of *Brigada SOS Huasco* also criticised that the Programme for Environmental and Social Recovery of Huasco served as a "façade" for participation (social movement participant 2). In this regard, participants diverted their efforts to address the

formulation of the latency plan for the territory, however the final report, issued by the government, did not include participants' contributions and discussions (Movimiento Socioambiental del Valle del Huasco, 2017a, 2017b). This observation was not only communicated by members of *Brigada SOS Huasco*, but also mentioned by other participants in this space, as I will explain in the next chapter (Integrantes de la sociedad civil del PRAS de Huasco, 2017).

Second, members of Brigada SOS Huasco expressed their rejection of political authorities' behaviour, which they considered as unacceptable from an ethical position, and which some interviewees did not doubt of qualifying as corruption (social movement participant 1; social movement focus group). A behaviour which they deemed questionable was the case of the frequent rotation of political authorities back and forth between governmental positions and directive boards in local industries. An example of this was Juan Sabando who was president of the worker's union in CAP Minería and later became mayor in Huasco between 1996 and 2008. He always denied that local industries had any responsibility for the environmental problem, declaring in an interview with a local newspaper that "it has been said that pellet plant affected the olive trees, and Guacolda industry did the same, but at the end this was a myth" ("En Huasco: firman protocolo de acuerdo para mejorar la calidad del aire", 2005). After not being elected in 2008, he returned to CAP Minería as director of environmental issues (Elgueta, 2013). Another example was Jorge Rodríguez Grossi, already mentioned in Chapter 3, who was director of Guacolda thermoelectric plant from 1997 to 2001, and later became Minister of Mining, when petcoke was legalized. He then returned to Guacolda thermoelectric plant, and again to the government as Minister of Economy in August 2017, during the last presidential term of Michele Bachelet (Centro de Investigación Periodística, 2017). Other non-exhaustive examples were Sergio del Campo, director of Guacolda thermoelectric plant and then Subsecretary of Energy; and María Ignacia Benítez, legal advisor of ENDESA for the project Punta Alcalde, and then Minister of Environment from 2010 to 2014 (Centro de Investigación Periodística, 2017).

Moreover, *Brigada SOS Huasco* condemned the provincial industries' illegal funding for political campaigns, and the investments of political parties in these same industries. While I was conducting my fieldwork, this was denounced by a publicised report on the Socialist Party and its investments in CAP Minería, ENDESA, owners of *Punta Alcalde* project, and AES Gener, owners of *Guacolda* thermoelectric plant (Ahora Noticias, 2017). In addition to this report, other cases of irregular funding for political campaigns were vividly discussed among members

of *Brigada SOS Huasco*. From those for which I could later find evidence, ENDESA admitted irregular funding of the presidential campaigns of Eduardo Frei and Michelle Bachelet, during the period of evaluation and approval of *Punta Alcalde* project (Pérez & Weissman, 2015; "Auditoría de ENDESA revela pagos irregulares a campañas políticas", 2015). Likewise, Consultora SGA, the enterprise in charge of lobbying for the approval of *Cerro Blanco* in Huasco and Freirina, illegally funded the presidential campaign of Michele Bachelet between 2013 and 2014 (Sepúlveda & Arellano, 2016). In terms of compliance with environmental regulations, *Brigada SOS Huasco* also denounced governments' deficient technical inspections and the lack of administrative sanctions on local industries (social movement participant 1; social movement focus group). In addition, they criticised the amendment of environmental regulations to facilitate industrial production and private investments in the province of Huasco, such as the use of petcoke, which was once illegal before these modifications (Movimiento Socioambiental del Valle del Huasco, 2017a):

Our authorities lie. Any intendent, any mayor, all deputies and senators. They have never represented us. In fact, deputies and senators are investors in these industries. So, what credibility could they have? They lie to you, while the industry continues killing you and filling you with diseases. Do you remember when they began one round table, and then another one? And these round tables led nowhere. How many times we said to people: round tables are useless; this has been happening for many years. (Social movement focus group).

Every time [people] are depending more on them [industries], because ultimately, they are a monopoly [...]. In the case of the state, the municipality, provincial, and regional governments, they are lackeys that ask for a favour from the industries, then ask for another favour. And above all, these industries give them money for them to make their activities. So, there are no chances to do something, or to expect that authorities do something. It is clear to us; they won't do anything. (Social movement participant 3).

Today, Chileans have the evidence that the political elite is bribed by economic power, by large electric and mining industries that have paid parliamentarians, political parties, regional and municipal authorities. And these, in turn, act as genuine spokespersons of these industries, they rule and legislate in their interests, promoting the looting and destruction of our territory. (Movimiento Socioambiental del Valle del Huasco, 2015).

With the purpose of denouncing political authorities and industrial representatives, *Brigada SOS Huasco* deployed a repertoire of strategies that included: the drafting of public statements, be they autonomous or as part of *Movimiento Socioambiental del Valle del Huasco*; the coordination

of demonstrations and public cultural activities; the painting of murals, as those included above in this chapter; and the organisation of protests against political authorities. In this regard, most of its members justified direct action, as opposed to acting through representative authorities, based on the lack of responses when channelling their environmental and health demands through formal participatory spaces, and based on the perceived corruption of political institutions (social movement participants 1 and 2; social movement focus group). However, it is necessary to say that there was a small group of participants of *Brigada SOS Huasco* who still expressed the importance of using institutional spaces for addressing their demands, together with more direct strategies. These different positions were the source of many discussions and debates among them, which I will refer to in detail in Chapter 7, in relation to the decision of a few of its members to participate in the Programme for Environmental and Social Recovery of Huasco. During my fieldwork, I had the chance to participate as an observer in the planning of one of the most important protests during the last four years in the territory, which was the protest against the visit of the Minister of Environment in April 2017. This activity will be further detailed in the next section.

"Minister [...], here we do not accept your lies!"

Only two weeks before its assigned date, the then Minister of Environment, Marcelo Mena, announced that his public annual account would be conducted in the district of Huasco, much to the surprise of members of *Brigada SOS Huasco*. It was very hard for participants in the organisation to understand the reasons behind this decision, including myself. After feeling disrespected and mocked, they speculated that the Minister of Environment was taking the opportunity to show government publicity for the implementation and approval of the final PRAS document (Ministerio del Medio Ambiente, 2017c), and the approval of the Air Pollution Prevention Programme in Huasco (Ministerio del Medio Ambiente, 2016), two important milestones in the recent environmental history in Huasco. At the day of the annual public account, *Brigada SOS Huasco* along with other socioenvironmental organisations in Valle del Huasco, assembled into 30 protestors and, among a total of 100 attendees, gathered for the event. Some protestors had to come from very far away. In the meantime, the government authorities, parliamentarians, and industrial representatives had their reserved seats in the first row.

When the Minister of Environment began to deliver his speech, the 30 protesters prevented him from speaking while shouting and playing vuvuzelas, and demanding that they read a public statement. The Minister of Environment repeated that this was a participative activity, and participation is dialogue. He angrily accused the local communities of being disrespectful and that they did not know how to dialogue while saying: "You will listen to me! I will stay here, and I will not go!" (field note 31). The protestors insisted they read their statement, which read: "we strongly reject [Minister's] presence in our territory, which we consider a provocation and an insult to the dignity of a territory in resistance". They continued by mentioning that the PRAS "is flawed from its inception, because it is a manipulated space, aimed at maintaining the current disastrous environmental situation, because everything depends on the criterion and decision of the same industries that are responsible for pollution". Furthermore, they declared: "we will not allow that governing authorities that rule and legislate to protect selfish interests of large companies that fund them, keep violating and annihilating our lives, our history, and the future of our children". Finally, they concluded the statement: "Minister, your public account should be delivered at the Confederation of Industry and Commerce, here we do not accept your lies!" (Movimiento Socioambiental del Valle del Huasco, 2017a)

After hearing this public statement, the then regional Intendent Manuel Vargas, demanded local communities to keep quiet or else leave, claiming that the protesters were endangering democracy and decentralization. After being challenged with environmental facts, he angrily questioned the representativeness of some of the protesters saying: "Who do you represent? You represent no one!" (field note 31). He stated that they, as government authorities, would not work for the minorities, referring to the socioenvironmental organizations. The protest lasted around one hour, after which the participative annual account was held with a small number of government supporters brought from different parts of the region in a strongly guarded meeting room in Huasco. After the protest, communities rejoiced and spontaneously organised a community lunch of fried fish, cooked rice, and many different salads for celebrating this event. Most importantly, communities discussed the necessity to continue their work together in defending their territory.



Figure 12: "Strongly guarded, the Minister of Environment deliveries his 'participatory' annual account in room N° 1" (Facebook post). April 17, 2017. Reprinted with permission from the author, Yahir Godoy.

"They see the suffering, they see it, but they are insensitive, like real mummies"

Members of *Brigada SOS Huasco* were not only disappointed by the role of political authorities and industrial representatives regarding the negative environmental and health outcomes in their territory, they also expressed in many of the interviews their anger and frustration against local health workers. According to many interviews and informal conversations, the frustration that many members of *Brigada SOS Huasco* expressed was related to the health workers' passivity regarding the serious environmental health problems affecting their communities, considering their legitimate expectations of what the role of health workers should be, i.e., to defend people's health (social movement participant 1; social movement focus group). In particular, they articulated their criticisms pointing to the silence of health workers regarding environmental pollution (social movement participants 1, 2, and 5), their economic dependency on local industries (social movement participants 2, 3 and 4), and their lack of knowledge regarding scientific evidence related to environmental pollution and health problems (social movement participants 1 and 2).

To me, the health services have been the most negligent. Health workers have been, what can I say, inhumane. Because people that work in the health sector should know what health means [...]. They see our many sick people, all people that die [...]. They see the suffering, they see

it, but they are insensitive, like real mummies. I think that the health sector should be defending this, because they see it, they work with people, they see people's suffering. But it is the opposite, they are immune, immune to affliction, they don't care. They get upset if someone tells them anything, they get upset because of [our] protests. (Social movement participant 1).

I think that they [local health workers] never were involved. I think that they were more proindustries, they had more commitments to the industries and local government than to people's health. I never saw anyone from the [health centre] with any environmental concern. And no one from the people I knew ever connected environmental pollution problems with a health problem among the population. And when you spoke about it, the nurse from the [health centre] denied everything! And here in the [other health centre], you could never talk to them about environmental pollution. (Social movement participant 2).

With all due respect to health workers, I think that they have a one hundred per cent passive attitude, speaking frankly [...]. I don't know if there is one, two, or three people that are probably worried about environmental pollution. But from the outside, I have never seen any awareness despite the fact that they work in health centres. Absolutely no preoccupation. (Social movement participant 5).

As mentioned above, because of the mistrust and frustration with government institutions and political authorities, most members of *Brigada SOS Huasco* did not include among their strategies participation within health centres as part of their political repertoire. Specifically, when I asked them about local health councils and participatory health assessments, most interviewees were not aware of their existence. However, one of them was former president in one of the local health councils in the district of Huasco. For her, local health councils had the potential to address urgent public health problems such as environmental pollution in the territory. However, she also expressed that these participatory spaces were usually controlled by health workers, and there was significant involvement of local industries in their functioning, coinciding with what was mentioned in Chapter 5. She also pointed out that environmental pollution was not in the interest of local health workers, but their efforts were aimed at solving more immediate health problems, such as waiting lists, and lack of medical supplies.

There we realised that the local health council could have relevance but [...] people did not realise the role they could have as a local health council. And at the end, directors use these meetings to comply with numbers, to fill papers. And the council does not realise the strength it could acquire within the health sector, or what they could generate within the health sector [...]. The topic [of environmental health] is not in their interest, because the thermoelectric

[power plant] comes with some cocktail, with some exposition of their environmental best practices, and all their stuff. (Social movement participant 3).

Only occasionally, local health workers have supported Brigada SOS Huasco's demands. This support, however, is on an individual basis, and for a short term, since they soon leave the territory. That was the case of one of them during my preliminary fieldwork in 2014. He was a medical doctor of CAP Minería health service, and publicly denounced the industry and resigned in an open letter in January 2014, soon after the final approval of Punta Alcalde. He resigned saying "Ashamed I renounce this filthy industry, and I hope never to work again for irresponsible interests of incompetent entrepreneurs like you, that only bring disease and suffering to these small communities" (Larraín, 2014). His resignation had an important impact on the community, and among members of Brigada SOS Huasco in particular. Soon after, the medical director of CAP Minería responded by arguing that "we categorically reject the expressions of [the medical doctor], lacking any scientific base, and sustained in superficial perceptions typical of an enthusiast professional, but with little experience" (Bravo, 2014). Another health professional from the primary health care centre also denounced, in a documentary released at the beginning of my preliminary fieldwork (Departamento de Prensa de Chilevisión, 2014), the impacts of environmental pollution on mental health in the local population, particularly among young people. He left his position soon before the documentary was aired (health worker, personal communication, January 2014).

Considering the importance that members of *Brigada SOS Huasco* posited on health workers, it can be said that this organisation has interacted with health workers in an intermittent and conflicting way during the last years. This interaction was mainly reduced to public protests, such as a protest inside the community hospital Manuel Magalhaes Medling in January 2014, during the summer season. The protest's goal was to denouncement the "absolute abandonment of the [regional] health service to people from Huasco" ("Brigada SOS Huasco realiza diversas manifestaciones públicas y funas en Huasco", 2014), and to request formal requirements of information, which, however, led to no results (social movement participant I; social movement focus group). More recently, *Brigada SOS Huasco* organized the first community dialogue of public health in Valle del Huasco, as mentioned above. This bottom-up initiative, where no health workers from Huasco were present, was characterised by a respectful and very honest conversation between participants, which contrasted with previous spaces of interaction, that were characterized by discontinuity, scepticism, and conflict.

"So, we started to study..."

One of the most distinctive characteristics of *Brigada SOS Huasco* is the profound technical development of their strategies regarding environmental health in Valle del Huasco. By technical development, I refer to the importance that members of this organisation placed on self-education and dialogue with technical advisors; their insistence in the dissemination of scientific information among local communities; and the use of scientific discourses as a political strategy to frame and legitimize their demands against political authorities and local health workers. In this regard, self-education has been especially promoted by two women, a primary school teacher and a housekeeper, that have been active members of *Brigada SOS Huasco* since its origins. They have devoted many years to grasp scientific information about environmental pollution and collective health in their territory, and to disseminate this information among their peers through direct conversations, workshops, meetings, and public statements. Particularly illustrative of this are the two libraries they have, comprising newspaper articles, theses, scientific papers, legal resolutions, and technical documents that they have compiled through the years, and which were of most importance for the development of this research.

As some research participants told me, before the constitution of *Brigada SOS Huasco* in 2010, some of its members were strongly dependent on the knowledge of local professionals, industrial representatives, and politicians that were in the directive boards of previous community organisations (social movement participants 1 and 2; social movement focus group). Interviewees often remembered how these people had their own personal political agendas, and some of them were reluctant to share information with other members of the organisation, and the community in general. Most members of *Brigada SOS Huasco* coincided in expressing their frustration when requesting information from government authorities, such as local mortality registries, most prevalent diseases, and information regarding environmental pollution. According to members of *Brigada SOS Huasco*, despite the fact that this information existed, public services did not provide this information to them. This knowledge dependency, together with political and organizational differences, prompted some members of *Brigada SOS Huasco* to develop processes of self-education that initially seemed insurmountable for them, due to the essentially technical character of most documents:

At first, we, teachers, farmers, have all self-educated ourselves, and we have had to read step by step, and there were many things that we did not understand and that we had to look for to understand [...]. It has been very difficult, but we have been able to reach where we are. We

have been able to deal with technical stuff, and to discuss at the same level with authorities [...]. All of us have self-educated ourselves, and it has been a beautiful work because we have created, like, a family. (Social movement participant 3).

This person had so much information, but he did not share it. Everything was secret and for us it was like Chinese. What would we know about emissions! That was like Chinese to us! So, I remember that once I started asking him many questions, for me to understand, and he replied: Well, I won't be here forever, get the information! Get the information! How can I be the only one that knows everything? So, he clipped our wings, and I wondered: who else I can ask? And then, I thought: The same way he learned, why can't we learn about these things? So, we started to study, at least I started to study. I started to read. I thought I could never be able to understand! (Social movement participant I).

Among the internal problems that we have experienced, I think that our lack of knowledge was very important. When someone talked about particulate matter, most of us had no idea. At some point our ignorance was a problem, it worked against us. But now I think that most of us handle basic concepts and understand what it is being said. There has been a collective and self-educating process. But it was very difficult to attain this. And to convince people of the importance of learning. (Social movement participant 13).

Brigada SOS Huasco's emphasis on scientific knowledge is more evident when compared to other organisations in Valle del Huasco. These latter tend to frame their demands around more general environmental topics and with a more emotional content. According to participants in this research that were part of other grassroots organisations in Valle del Huasco, such as Asamblea de Freirina, and Asamblea por el Agua de Guasco Alto, the technical capacity of Brigada SOS Huasco to understand their problems, to disseminate information regarding environmental health to other organisations, and to articulate their demands through scientific concepts, constituted a fundamental characteristic of their broader struggle strategies as Movimiento Socioambiental del Valle del Huasco. Some of the disciplinary knowledge members of Brigada SOS Huasco include in these strategies are law, environmental sciences, political sciences, and epidemiology, among others.

The importance of *Brigada SOS Huasco* is their capacity to understand environmental impact assessments, the technical discussions, and the health aspects. And I think that is something very valuable in our struggle and resistance. I admire the resistance of *Brigada SOS Huasco*, their consistency to keep moving forward educating the community. I think that it is something very valuable that they have, and their technical capacity. (Social movement participant 6).

When we started to plan this process of resistance and organisation, we looked at Huasco because they already had an organisation with many years in the territory, which is *Brigada SOS Huasco*. And together we started working. Little by little we began to understand in a more profound way the problem in Huasco, because a fundamental characteristic of *Brigada SOS Huasco*, that differs from Freirina, is their technical capacity. People in Huasco had a technical capacity to be able to explain the conflict and the health consequences to its population in a very precise way [...]. Huasco came to be our brother territory. We depended on them absolutely. In the streets, the demands that the entire Valle del Huasco began to manifest were absolutely related to them. (Social movement participant 8).

"A few years ago, people treated us as though we were insane"

A general agreement among members of *Brigada SOS Huasco* and other participants in this research, such as members of local health councils and health workers in the district of Huasco, is that the organisation's most important achievement is the incorporation of environmental pollution and health problem notions as explicit discoursive elements among local communities. According to the narratives of members and supporters of *Brigada SOS Huasco*, previously, environmental pollution was a latent concept that did not permeate public discussions in the territory. The small number of people that openly spoke about environmental pollution and health problems in Huasco were considered as "terrorists" (social movement participant 1; social movement focus group), "advocates of violence" (social movement focus group), "insane" (social movement participants 3 and 4), and "outsiders" (social movement participants 1, 3, and 13). Today, more people acknowledge and articulate the idea of environmental pollution as a central problem in the district of Huasco, and more broadly in Valle del Huasco:

We have advanced a lot in consciousness. A few years ago, people treated us as though we were insane, what we were doing was insanity. Now, most people here are conscious that there is pollution. The problem now is how to mobilise them. That is what we need in Huasco, and the problem is that mobilisation does not occur because people are very close with local industries. (Social movement participant 3).

Linguistically, the word "pollution" was a taboo, as was "homosexuality", "sex", "vagina", I do not know [laughs]. Nevertheless, out of ridicule, it was a word that was not in the common vocabulary, as you could not name it [...]. But later, and through the force of SOS Huasco, there is a rupture of discourse at the psychological level. [Pollution] was an obscured word. But

now it is a word you can say, even if it still produces conflicts within families [...]. This is an important achievement. It is an achievement when people, through our activities such as video campaigns, leaflets, demonstration, discourses, radio interventions, murals, know some concepts about pollution. (Social movement participant 12).

A very important achievement [of *Brigada SOS Huasw*] is through language. You could say it is minimal, small, but in such as compromised environment, so complex, so annihilated as Huasco is, it is a big achievement. The fact that our neighbours, beyond industries' threats, beyond all of this, can say the word pollution [...]. And this achievement relates to our work, with all communicational strategies, community strategies, our actions, that we have done here in Huasco. (Social movement participant 13).

Another achievement that could be attributed to a certain extent to Brigada SOS Huasco is the open delegitimation of political authorities in the territory, and the loss of fear to criticize them in public. Because of their constant denouncements of government authorities and industrial representatives, and the public impact these activities have had at the local and provincial level, many other organisations have replicated these strategies. For example, while I was conducting my fieldwork in March 2017, local olive growers from Huasco Bajo invited me to participate in one of their meetings where they would discuss the negative effects of environmental pollution with iron on local agriculture. For this occasion, local olive growers also invited regional environmental and agriculture authorities. In the meeting, local organisations openly called into question and criticized regional authorities for what local olive growers considered unfulfilled promises, and put into evidence their contradictions and inaccuracies regarding environmental pollution and agriculture production. Local olive growers and their families prepared banners denouncing the passivity of public services and their responsibility in the gradual decline in agriculture production in the districts of Huasco and Freirina. An enormous canvas, that could not fit in the meeting room, stated "the olive tree is polluted, not because of the farmer, but because of those that do not do anything to protect it" (field note 27):

Now, there is no immaculate vision of a political authority, and I think this is because of us. We had confronted every authority that came to Huasco in discourse. The fact that four Ministers have already come to Huasco, I think, is an enormous achievement. (Social movement participant 13).

Likewise, local communities in the district of Huasco acknowledged the importance of *Brigada* SOS Huasco, and Movimiento Socioambiental del Valle del Huasco, and how these organisations

defended collective health and the environment. However, this process had been long and complex in time. A clear example of how some formal organisations in the territory looked at social movements can be found in a letter drafted by provincial neighbourhood associations where they expressed their support to local industries such as CAP Minería, and Barrick. In this document, representatives of neighbourhood councils characterized members of social movements in Valle del Huasco as "ignorant", "stubborn", and "outsiders" that do not have roots in their territory (Godoy et al., 2007). More recently, however, many people in the district of Huasco publicly recognized the importance of *Brigada SOS Huasco*, especially after the case of the protest against the Minister of Environment, as described above. Despite the recent support and legitimacy people gave to the organisation, many participants of *Brigada SOS Huasco* were aware of the difficulties they had to face to keep working for and developing their territory. This was mainly due to the intimate relationship these communities had with local industries, and the political instrumentalisation of these organisations by external actors, which is seen as a permanent threat:

When [Brigada] SOS Huasco was established we had many young people, but because of family issues – a cousin, a brother – all of us are related to industries directly or indirectly, so there is always family pressure for most young people to not get involved in protest activities, much less to be part of [Brigada] SOS Huasco. (Social movement participant 13).

Huasco has always been the exemplar of a sacrifice zone [...]. Some could define it as a corporative territory where people's necessities are linked to what one industry can say, and where the State simply disappeared. Therefore, the territory is given to these industries as a source of resources under their own mercantile logic. Because Huasco's history has been constructed through the ideas of development, and employment, pollution was normalised. And local industries exert a social control over families, mostly CAP [Minería] that comprises most job positions. Therefore, the scenario for [Brigada] SOS Huasco is not favourable at all. (Social movement participant 11).

My father worked in CAP [Minería] all his life, we grew and were educated because of his work. So, it was very complex for us as a family to have a position against the company. I remember having discussions with my father so many times because of this. So, I had tried to avoid talking about pollution, to keep it as far away as possible from my relationship with my family (Social movement participant 12).

Chapter 7: Programme for Environmental and Social Recovery of Huasco

In this chapter, I examine the implementation of the Programme for Environmental and Social Recovery of Huasco (PRAS, in Spanish), an "unprecedented" space for collective participation specifically designed for addressing environmental and social problems in the territory (Ministerio del Medio Ambiente, 2017c, p. 8). Initiated in July 2015, this participatory programme brings together government authorities, civil society, and the private economic sector (Ministerio del Medio Ambiente, 2015). In what follows, I first refer to the discursive context and rationale for its design and implementation. Particularly, I highlight the role of organised industrial representatives as central actors that allows understanding the limits and possibilities of this participatory space. I analyse their discourses as they appeared in regional and provincial press from April 2012, during the first massive mobilisations in Freirina, to July 2015, when the PRAS began. In the second section, I provide a detailed account of my observations in this space. For this, I focus on the different, and often antagonistic, narratives expressed among participants in PRAS. For purposes of clarity, I selected three main themes that articulate most divergent positions among participants, i.e., different conceptualisations of participation, extractivism and sustainable development, and violence.

The reasons and context for the creation of PRAS

The description of the discursive context in Atacama region, and the province of Huasco in particular, during the period between April 2012 and July 2015, provides important elements for understanding both the rationale and the scope of PRAS. As argued in Chapter 3, Huasco has experienced profound transformations in its economic and social organisation, including processes of labour insecurity associated with the development of energy generation and industrial mining activities. As such, Huasco has a high percentage of migrant and non-qualified workers, with temporary or short-term contracts (Ministerio de Desarrollo Social, 2015), and high variability in provincial employment rates, persistently higher than in Atacama region and the country (Instituto Nacional de Estadísticas, 2018). In addition, after the massive mobilisations in Huasco and Freirina in April 2012, the territory is characterised by increasing scepticism and delegitimation of government authorities and participatory programmes, as

explained in detail in Chapters 05 and 06. In April 2013, participants of *Movimiento Socioambiental del Valle del Huasco* demanded the then President Michelle Bachelet, make a statement regarding her position on *Pascua Lama*, *Agrosuper*, and *Punta Alcalde* projects in the province, without receiving any response (2014c). In December 2014, grassroots organisations announced a "new phase of struggle", considering the lack of communication with government authorities, and the irregular approval of *Punta Alcalde* thermoelectric project by the Council of Ministers, after its initial rejection by the Regional Environmental Commission in Atacama (Movimiento Socioambiental del Valle del Huasco, 2014a).

However, social movements were not the only actors unfolding their strategies regarding environmental health in the territory. During this period, regional industrial representatives also expressed their concern for the suspension and judicialisation of investments projects in Atacama, and the increasing influence of social movements in the public space ("Empresarios piden garantías para reiniciar proyectos", 2014). Regional industrial representatives are grouped in the Corporation for Economic Development in Atacama (CORPROA, in Spanish), the most important industrial organisation in the region. Today, it accounts for around 70 per cent of total regional GDP, and includes Agrosuper, Barrick, CAP Minería, and Guacolda, among others (Corporación para el Desarrollo de la Región de Atacama, 2018). This organisation systematically used regional and provincial press, particularly Diario Chañarcillo, to articulate their own demands for the resumption of suspended investment projects in the province, such as Punta Alcalde project in Huasco, Agrosuper agroindustrial project in Freirina, and Pascua Lama mining project in Alto del Carmen ("Empresarios locales esperan que se reactiven grandes proyectos de inversión", 2014). From the document analysis of regional and provincial newspapers of the period from April 2012 to July 2015, it is possible to recognise that their discourses were sustained in three main themes: a) the uncertainty for private investors in the region considering the many obstacles for economic development, b) the articulation of a dichotomous narrative between economic development and economic stagnation, and c) their self-portrayal as a rational, non-ideological, and non-politicised group.

Regional industrial representatives often articulated their apprehension due to the climate of economic insecurity for private investments in Atacama. According to regional and provincial media, members of CORPROA expressed this main idea by repeatedly utilising concepts such as "fear", "uncertainty", and "lack of guarantees". At the same time, they demanded from government authorities the generation of favourable conditions for dialogue, and assurances for the economic interests of foreign investors in Atacama:

Regional reality shows that there is no dialogue, especially with the most radical sectors in Atacama that have impeded investments of many millions of dollars [...]. Unfortunately, these situations do not guarantee entrepreneurs to return calmly to the region without the fear of acts of vandalism as we have seen in the past. ("Empresarios piden garantías para reiniciar proyectos", 2014).

I believe that the government should dissipate as soon as possible the high level of uncertainty due to publicised reforms, and clarify environmental regulations [...]. [Government] should give strong gestures to markets for these to trust again for investments, which is the fundamental base for the economy. ("Empresarios regionales lamentan pérdidas de fuentes laborales en Atacama", 2014).

Today there is uncertainty in investment, and industrial investors see what happens in Huasco through the media, and see what is happening in Chile. Many of foreign investors prefer to wait, or to invest in projects in Peru, because our country is in a phase of uncertainty. ("Las potencialidades del Valle están, pero debemos saber cuándo", 2015).

Furthermore, in a report titled "What inhibits investment in Atacama?" (Corporación para el Desarrollo de la Región de Atacama, 2016), regional entrepreneurs used the concept of judicialisation, referring to the seemingly arbitrary legal obstacles that industries face due to excessive environmental regulations and resistance from local communities. For them, judicialisation constituted one of the most important internal factors that impeded economic development in the region, proposing that existing legal regulations should be modified to overcome this problem, and thus facilitate industrial activities:

Now in Atacama it is very costly to invest [...]. We have so many judicialised projects, and others that, even complying with legal regulations, do not continue because of lack of guarantees for their development. Together, we need to change this situation, we need to recompose trusts and to be clear that our country is governed by laws that must be followed. ("Debemos recomponer las confianzas y trabajar unidos por Atacama", 2014).

We are concerned about the permanent obstruction of projects that, in accordance with the rule of law, would allow the socioeconomic development that the country needs. Projects are facing increasing obstacles, not only the usual difficulties related to their design, construction, and operation, but also delays in environmental approvals, long negotiations for land and other property rights, and opposition from citizens and indigenous communities (Corporación para el Desarrollo de la Región de Atacama, 2016, p. 10).

We need to improve our laws to minimize judicialisation. Today there are many reasons to judicialise [projects], so we need to do these small changes in legal regulations [...]. When projects are in a more advanced phase, it is easier to find conflict of interests and the emergence of protagonists and actors that should not be, because they are not from the communities, or because their only aim is to judicialise for their own economic interests. ("Presidente de SONAMI pide cambiar leyes para evitar judicialización de proyectos", 2017).

As mentioned above, regional industrial representatives also framed their discourses through the dichotomous narrative of economic development versus economic stagnation and poverty. On the one hand, they implicitly described their economic activity as "sustainable development" (Llorente, 2014), and argued that the environmental and health impacts on local communities derived from industrial activities were inevitable. On the other hand, they presupposed that any alternative to their economic development model would lead to economic stagnation and poverty in the region. This dichotomy is clearly articulated in an editorial article written by the then president of CORPROA Daniel Llorente, in *Diario Chañarcillo*:

Can a community survive without interventions in their territories? I do not think so. Today we are facing a dilemma. Do we move forward using our natural resources and respecting our environment? Or do we stay impassive, watching how our wealth is not used and natural resources remains intact? I am convinced that we need to take the first option, through sustainable development. We need to be aware that everything we do will have an impact. The key is to reduce as much as possible these adverse effects, and this way to allow the wealth of our territory to provide benefits to all its inhabitants. (Llorente, 2014).

The dichotomous narrative of economic development and stagnation was further reinforced by a third discoursive strategy among members of CORPROA, portraying themselves as responsible actors willing to dialogue, above any ideology or political interest. They also described themselves as regionalists, and representatives of an ample majority of people in Atacama. On the contrary, those individuals and groups who criticised, or opposed regional and industrial activities were represented as "hotheads" ("Trabajemos en conjunto y construyamos una nueva Atacama", 2014), "radicals" ("Empresarios piden garantías para reiniciar proyectos", 2014), and "outsiders" ("Presidente de SONAMI pide cambiar leyes para evitar judicialización de proyectos", 2017), ideologically and politically motivated:

We demand to set aside ideologies that contribute little to the necessary union of forces, and to value employment generated by investments. CORPROA is available to promote good practices that are in line with the dream of a developed region and opportunities for all. ("Aumenta la preocupación por cifras económicas de Atacama", 2014).

Regions that abandon dialogue and opt to live in the fear generated by a small group of hotheads will not allow development, but will generate poverty. We see it in some localities: investors are afraid not only because of social conflict, but also because of the decisions we take as a country, and the way government authorities and communities perceive entrepreneurs and foreign investors. ("Trabajemos en conjunto y construyamos una nueva Atacama", 2014).

Many people are looking at us and trust in us. CORPROA has been, and will be available [for dialogue] because our love for Atacama is above any other emotion or ideology. We are only moved by the region, its people, and the virtuous right to start a business in an honest and sustainable way. We are still here for the service of the region, and attentive to the call from regional government [for dialogue] when it deems convenient. ("Estamos por sobre la ideología, sólo nos mueve la región", 2015)

The discursive dichotomies employed by regional industrial representatives organised in CORPROA, i.e., economic development versus economic stagnation, and their rationality and willingness to dialogue versus the irrationality of those who oppose economic development, were also expressed and reproduced among some community organisations in Valle del Huasco. Members of these organisations recurrently emphasised the lived experiences of unemployment and poverty in the territory. After the indefinite closure of *Agrosuper* in December 2012, and the subsequent dismissal of 240 workers from the industry, a number of *Agrosuper* ex-workers coordinated barricades and roadblocks in the province, demanding their rehiring ("Ex trabajadores de Agrosuper se toman ruta 5 norte", 2013). Four *Agrosuper* ex-workers also held a ten-day hunger strike inside the cathedral of Vallenar, denouncing what they considered an unjust decision prompted by "delinquents" ("La dura realidad de los ex trabajadores de Agrosuper", 2013). One of them declared in the provincial newspaper *El Noticiero del Huasco* that:

We are tired of injustices. [This is because of] Freirina and its delinquents. We want the industry to come back, because most of workers were women, elderly, single mothers. They [Agrosuper] helped us in everything we required. Here in the region there are no industries that hire women, we are always drifting, and we can't emerge. ("La dura realidad de los ex trabajadores de Agrosuper", 2013).

Similarly, in October 2014, and after the provisional suspension of *Punta Alcalde* project in Huasco, other *Agrosuper* ex-workers and local entrepreneurs in Valle del Huasco coalesced in "*Freirina Esperanza*", a grassroots organisation dedicated to defending local and provincial industries, and demanding the return of postponed projects ("Ante postergación de Punta Alcalde", 2014). They organised signature collection campaigns, community kitchens, and released public declarations and interviews in provincial and regional media, demanding the creation of round tables with industrial representatives and regional government authorities ("Movimiento 'Freirina Esperanza' realiza actividades para concientizar", 2014; "Confiamos en que la presidenta puede hacer el llamado a los alcaldes", 2015; "Vamos a empezar un 2015 en peores condiciones", 2015). In May 2015, after meeting with representatives of *Agrosuper* in the province, and amid intense lobbying for the return of *Agrosuper* to Freirina, the then president of this organisation declared:

We have knocked many doors, because our struggle is not political, it is not left or right, but is a transversal hope of inhabitants of this territory that live in poverty because of the incomprehension and ineffectiveness of our authorities [...]. They don't understand that [Agrosuper] is the only solution for those of us who have been unemployed for many months, with no decent income. ("Agrosuper nos aseguró que tenía el interés de regresar", 2015).

Considering the preceding, the Programme for Environmental and Social Recovery of Huasco is a participatory programme designed in a highly complex socioeconomic and environmental context, characterised by precarious working conditions among its inhabitants, scepticism and delegitimation of political authorities from grassroots organisations, and increasing pressure from industrial representatives for the resumption of suspended projects in Valle del Huasco. In the next section of this chapter, I describe the main characteristics of the PRAS, and I will argue that its configuration, its scope, and the mechanisms for decision making within it, are the result of the contradictions discussed above.

The PRAS: unprecedented participatory programme?

In October 2013, during the presidential campaign that ultimately led candidate and former President Michelle Bachelet to the government for her second term, she acknowledged in her government programme both the serious consequences of environmental pollution on people's health and the unequal distribution of environmental conflicts, affecting disproportionately the

most vulnerable communities in Chile (Bachelet, 2013). In her government programme, Michelle Bachelet assumed a formal commitment for the creation of participatory spaces in those territories affected by environmental pollution (Bachelet, 2013). According to this document, these new spaces for citizen participation would be decentralised, and oriented towards community guidance and information delivery:

Communities do not have information or enough resources to cope with environmental conflicts within their territories. We will establish the institutional mechanisms and resources to effectively deliver guidance, mediation, and defence of citizens that facilitate the solution of local environmental problems. For those communities potentially affected by a project undergoing environmental evaluation, we will design a supportive technical body aimed to analyse and understand with them the consequences of the eventual establishment of a specific activity, and to facilitate their informed participation in environmental assessments. (Bachelet, 2013, p. 127).

After assuming the presidency in March 2014, Bachelet's government initiated the phased implementation of these new spaces for participation in three territories historically affected by socioenvironmental problems and ongoing social mobilisation. In December 2014, the first PRAS was implemented in Quintero-Puchuncaví on the coast of Central Chile. In July 2015, the second PRAS was established in Huasco, and in December 2015, the third PRAS was inaugurated in Coronel, on the coast of Southern Chile (Ministerio del Medio Ambiente, 2017a). As mentioned in Chapter 3, these territories produce a large proportion of total energy from coal-burning thermoelectric plants in the country (Comisión Nacional de Energía, 2018). In particular, the PRAS in the district of Huasco was implemented considering the high annual average concentration of PM₁₀ (Ministerio del Medio Ambiente, 2012), and the constitutional right of people to live in an environment free of pollution (Ministerio del Medio Ambiente, 2015). It was a parallel effort to the formulation of the Air Pollution Prevention Programme in the territory, initiated in July 2014 due to the official declaration of Huasco as a latent area for air pollution. The main objective of the PRAS in Huasco, as stated in official documents, was:

To recover the environment and to improve life quality of inhabitants of the territory through the identification, through a widely participative process, of most pressing social and environmental problems, proposing solutions that transform it, in the medium and long term, into a territory that shows that the harmonic coexistence of industrial activities, environmental protection, and good quality of life for the people is possible" (Ministerio del Medio Ambiente, 2017c, p. 17).

The PRAS in the district of Huasco is a space for citizen participation in which civil society, industrial representatives, and government authorities engage into a permanent dialogue and reach consensus about local environmental and social problems, and propose strategies to address these (Consejo para la Recuperación Ambiental y Social de Huasco, 2015). Specifically, it includes twenty-four councillors: ten representatives from civil society (including neighbourhood associations, elderly associations, environmental organisations, and cultural organisations), four representatives from local productive activities (olive growers and fishermen), two representatives from the industrial sector (CAP Minería and Guacolda thermoelectric plant), and eight representatives from national, regional, and municipal government, including the mayor of Huasco, environmental and health regional authorities. Furthermore, each councillor has a substitute, in the event of absence of the incumbent (Consejo para la Recuperación Ambiental y Social de Huasco, 2015). According to its own regulations, the Mayor of Huasco is the president of the council, and the Regional Secretary of Environment is its executive secretariat, not mediating any electoral process (Consejo para la Recuperación Ambiental y Social de Huasco, 2015). Despite the PRAS sessions being open to the public, only incumbent councillors are entitled to speak and vote (Consejo para la Recuperación Ambiental y Social de Huasco, 2015).

Ordinary sessions are coordinated at least forth-monthly, requiring a minimum quorum of thirteen councillors, which correspond to an absolute majority. As mentioned above, and according to its own regulations, PRAS sessions are public, and audio recordings and presentations' slides are available on request (Consejo para la Recuperación Ambiental y Social de Huasco, 2015). However, in an official investigation in 2017, it was confirmed that there were no public audio registries for the first eight sessions (Contraloría General de la República, 2016). PRAS agreements require consensus of all councillors, and in those issues that there is no unanimity, "the majority of councillors cannot impose decisions on the minority, let alone, to enforce economic commitments on stakeholders without their consent" (Ministerio del Medio Ambiente, 2015, p. 5). According to official documents from the Ministry of Environment, some principles that guide the PRAS are non-discrimination, inclusion, representativeness, transparency, collaboration, equity, gradualism, and responsibility (Ministerio del Medio Ambiente, 2015). The PRAS has been acclaimed by government officials as an unprecedented participatory body were "social actors sit together around a table in equal conditions" (Ministry of Environment worker 01).

The design of the PRAS involves five delimited steps: a) the collective assessment of local problems (phase 1), b) the collective drafting of strategies in a pre-project report (phase 2), c) a public consultancy of the pre-project report (phase 3), d) the formulation of the definitive project (phase 4), and e) its follow up (phase 5), as seen in Figure 13 (Consejo para la Recuperación Ambiental y Social de Huasco, 2015; Ministerio del Medio Ambiente, 2017c). In the first phase of the PRAS, environmental and social problems in the district of Huasco are discussed and separated into eight predefined areas: a) air, b) water, c) sea, d) land, e) landscape and biodiversity, f) society, g) health, and h) infrastructure (Ministerio del Medio Ambiente, 2017c). Each one of these components include a number of problems related to the specific area. Additionally, each problem is connected to a specific solution, which also include a proposed deadline, coverage, and prioritisation. Some of the selected problems were: the use of petcoke, industrial pollution from CAP Minería and *Guacolda* thermoelectric plant, pollution of the ocean environment by CAP Minería, lack of green areas in the city, existence of illegal dumps, and lack of medical specialists in the province (Ministerio del Medio Ambiente, 2017c).

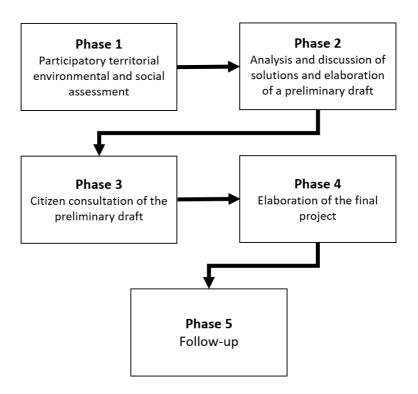


Figure 13: Phases for the formulation of the PRAS. Adapted from *Programa para la Recuperación Ambiental y Social de Huasco*, by *Ministerio del Medio Ambiente* (2017c).

During my fieldwork, I could participate in the last phase of the collective drafting of strategies in a pre-project report, the public consultancy of the pre-project report, and the formulation of the definitive project, i.e., phases 2 to 4. According to my observations, the PRAS consisted of monthly meetings, except in February because of summer holidays, and multiple community workshops during the phase of the public consultancy between mid-September and October 2016. These workshops were held in the Cultural Centre of Huasco, urban and rural schools in Huasco Bajo and Carrizal Bajo, *Guacolda* thermoelectric plant's sports complex, and neighbourhood council centres (Ministerio del Medio Ambiente, 2017b). In this regard, organisers from the Ministry of Environment were very concerned for including the largest number of people during the public consultancy phase, and used diverse mechanisms for diffusion of the activities, including public banners, newspapers, and local radio messages. According to the Ministry of Environment, the public consultancy phase in the district of Huasco consisted of eight community meetings, including 173 participants, and received 330 observations from 65 people (Ministerio del Medio Ambiente, 2017b). In the following sections, I will refer to specific moments and themes of my ethnography in the PRAS.

Community empowerment: collective withdrawal and enforcement of themes

During my fieldwork, ordinary meetings in the PRAS were held in respectful terms, yet not in a relaxed atmosphere. Frequently, people were seated in groups by affinity and occupational affiliation, in a U-shaped table. Usually, government authorities sat in one of the extremes of the table, while industrial representatives sat in front of them. Civil society councillors often sat together, at the bottom of the table. I sat with them. In general, and despite the declared aim of being a horizontal space, during the sessions of the PRAS I witnessed a more vertical approach from government officials. For example, the dynamics of dialogue and interactions during the meetings were characterised by a leading role of government representatives, who usually had the first word, decided when to start the sessions, selected the themes for discussion, and allocated the time for expositions. Furthermore, government officials were in charge of the coordination of the sessions, of taking the minutes of the meetings, and of systematising the discussions and agreements among the rest of the participants. As I will refer later in detail, there was also an external company that was in charge of providing the materials for the meetings, and for organising the coffee breaks. In general, they did not participate in the discussions.

On two different occasions, I witnessed how civil society councillors were close to a collective and organised withdrawal from this space, due to unfulfilled agreements by government authorities. In September 2016, a group of civil society councillors, including one supporter of Brigada SOS Huasco, organised a collective withdrawal from one of the PRAS sessions because government authorities did not submit the previous session's agreements. In specific, some civil society councillors requested an opportunity to deliver a presentation to the rest of the members of the PRAS about the problems of the modelling of local environmental pollution, which was used in the formulation of the Air Pollution Prevention Programme in Huasco. This presentation was prepared by one supporter of Brigada SOS Huasco, who also participated in the PRAS. It included a detailed, yet comprehensible revision of a technical document written by the Pontificia Universidad Católica de Chile, evidencing the limits of the air modelling utilised in the Air Pollution Prevention Programme, such as the exclusion of potential new sources of pollution in the territory including Punta Alcalde thermoelectric plant and Cerro Blanco (Departamento de Ingeniería, 2015). After a very tense moment at the beginning of the meeting, government authorities who were evidently distressed, pulled back, and accepted to listen the exposition, as it was agreed in the previous session. After the presentation, local communities demanded the creation of two special commissions for working exclusively on the air and water components, criticizing the fragmentation of the PRAS in multiple areas that only diverted their attention and strengths:

The creation of the water and air commissions was because of the pressure we exerted inside the PRAS. We had absolute clarity of what we wanted. And this changed the objectives of the programme. If you see it, they divided it in land, air, water, landscape, wetlands, and others, disaggregating the problem. For example, they gave utmost importance to eradicating street dogs. But the fundamental problems were not being addressed until we hit the table, saying: no, here what we want is this [water and air]. We gave them no other alternatives than to create two commissions of the themes we have been struggling so long for. I think that was an important achievement. (Social movement participant 2).

On another occasion, in January 2017, and soon after the approval of the Air Pollution Prevention Programme in Huasco in November 2016 (Ministerio del Medio Ambiente, 2016), civil society councillors in the PRAS used quorum requirements to suspend a meeting. The adduced reason was to have more time to read and analyse this new Air Pollution Prevention Programme, which according to some councillors, differed notably from the original programme presented to the community one year before (social movement participants 1 and 2; local health council participant 2). For example, it extended the period for local industries

to implement technical improvements; it implied a real increase in current industrial emissions; it did not included in its modelling the potential effects of the recently approved *Punta Alcalde* thermoelectric project or *Cerro Blanco*, as mentioned above; and it did not include updated information from the air monitoring stations in the territory, among many other observations (Brigada SOS Huasco, 2017). A few days later, when the meeting was resumed, one of the civil society councillors in the PRAS read an open letter. In a four-page document, they wrote:

It causes us indignation and repudiation that the Air Pollution Prevention Plan just approved by the Council of Ministries is so different from the draft we knew and studied in detail while we were working in the formulation of the PRAS. If that plan, which industries must comply with by law, maintains its favour to these industries, delaying and prolonging the deadlines of already insufficient measures, there is little we can expect from the PRAS that does not have any legal capacity to stop industries or governments doing anything they object to [...]. This has been enough violation to our dignity. We feel that everything has been a strategy to bury once and for all our port city, but now they will say that it was with the participation of communities. We, civil society councillors, withdraw from the PRAS outraged, convinced that we have been manipulated again (Integrantes de la sociedad civil del PRAS de Huasco, 2017).

Visibly upset, government authorities and industrial representatives maintained silence (field note 23). It was an unexpected move from civil society councillors that compromised the original planning for the final approval of the PRAS. The civil society councillor continued reading the letter, and finished by saying:

This process promoted by the government, and the approved Air Pollution Prevention Plan for Huasco, seem to us an offence to our intelligence, trust, and evidently to our rights to health and to live in an environment free of pollution. That is why, with disillusionment and rage, we withdraw, because we are not willing to validate nor legitimate deception anymore, that only end up destroying the most valuable things that we have left, the trust in ourselves and in our community. (Integrantes de la sociedad civil del PRAS de Huasco, 2017).

Promptly, government officials agreed to bring for the following session a professional from the Ministry of Environment who was in charge of drafting the Air Pollution Prevention Programme in Huasco, to explain in detail the aims and content of the programme. Thus, local communities would have the opportunity to resolve what government authorities considered only an "unfortunate misunderstanding" (field note 23). Similarly, industrial representatives from CAP Minería and *Guacolda* thermoelectric plant agreed to explain at length what would be their responsibilities after the promulgation of the Air Pollution Prevention Programme in

Huasco. On this occasion, and after government authorities' commitments for maintaining the functioning of the PRAS, civil society councillors accepted to attend this extraordinary meeting, but in the meantime, they ceased their participation in the PRAS.

Later, in the agreed meeting which was coordinated a week after, the professional of the Ministry of Environment delivered a thoughtful presentation on the Air Pollution Prevention Programme in Huasco. Due to the absence of key civil society councillors, including supporters and members of *Brigada SOS Huasco*, none of the other councillors were able to articulate their concerns regarding the modifications of the programme. Additionally, representatives of CAP Minería and *Guacolda* thermoelectric plant gave their presentations. During the exposition of CAP Minería, I witnessed how one of its directors acknowledged openly and in front of government authorities, that they were not complying with one specific environmental regulation regarding the length and covering of the train wagons that transport iron ore from Vallenar to Huasco. He further added that they have never received any sanction. Due to the sensitive nature of this problem, especially among olive growers in the territory as mentioned in Chapter 6, many of them felt outraged and had to literally bite their lips, as I saw the person next to me (field note 26). At the end of the session, civil society councillors agreed to continue working in the PRAS.

PRAS: delegitimation, democracy and participation

Albeit the PRAS in Huasco is described by government authorities as an equal and horizontal space for citizen participation, in terms of its regulations and functioning, it poses some significant problems. Official documents and narratives refer to the PRAS as a "permanent democratic dialogue", and an "ample participatory process" (Consejo para la Recuperación Ambiental y Social de Huasco, 2017, p. 12). According to my research, the ideas of participation, horizontality and equity in the PRAS refer mainly to the possibility of dialogue among different actors, irrespective of the results. During one of the interviews, one of the government authorities involved in this programme said that the PRAS is "unprecedented because it has all these different actors, and these actors are on equal terms around a table. No one is above another person. All of them represent many sectors, and all of them are on equal terms" (Ministry of Environment authority 1). When I asked about power disparities in the PRAS, another government authority responded that "equality is the possibility of proposing themes, to agree on how to solve them. Perhaps, industries want to do one thing, and

communities do not agree. And if there is no agreement, then there will not be a final decision" (Ministry of Environment authority 3). She went further and said:

So, how do we level powers imbalances regarding decisions? How can we do this, to agree on something? That will depend on the way things are proposed, and the way we work inside the PRAS. Although it is true that there are some participation quotas, power is related to your capacity to sit and agree on something. I believe that instead of thinking that someone has more power than the rest, power lays in the collective if they are able to take decisions that can satisfy all of them. (Ministry of Environment authority 3).

Furthermore, for most government authorities, participation in the PRAS was also conceptualised as to disseminate information to citizens, and "to give an opinion" (PRAS workshop 3, October 2017). As mentioned above, one of the main concerns among government authorities was to circulate information about the PRAS, and to include a wide range of community representatives and other stakeholders during the phase of the public consultancy (phase 3). For the purpose of distributing information relating to the programme, coordinators of the PRAS outsourced the production of graphic material such as paper windmills, eco-friendly bags, newspapers, banners, a web page, and multiple radio and provincial newspaper advertisements (Ministerio del Medio Ambiente, 2017b). For the purpose of including a wide range of people to participate in the phase of the public consultancy, government authorities with the support of the outsourced company, held multiple workshops between September and October 2016 about the mechanisms available for people to provide comments on the pre-project report, which consisted of a 227-page document. As noted above, the phase of the public consultancy included 173 participants, and received 330 observations from 65 people (Ministerio del Medio Ambiente, 2017b).

As I described at the beginning of this chapter, the implementation of the PRAS in the district of Huasco coincided with a gradual and generalised process of delegitimation of political authorities in the province. In particular, for members of *Brigada SOS Huasco*, the PRAS was a "manipulated space, aimed at maintaining the existing environmental conditions in the territory" (Movimiento Socioambiental del Valle del Huasco, 2017a). During the phase for the public consultancy of the pre-project report (phase 3), some lay members of the community also expressed their scepticism regarding the purposes and the scope of the PRAS, and manifested their frustration with what they perceived another round table that would bring no results (PRAS workshop 1, September 2016). In general, during the PRAS sessions and workshops, government authorities tended to omit any self-critique regarding the process of

delegitimation of political authorities. Furthermore, they occasionally employed discursive strategies, such as the diffusion of responsibilities: "we are all responsibles as a society" (PRAS workshop 2, October 2016); to place the responsibility of the success of the PRAS on local communities: "we cannot afford to lose this opportunity" (PRAS workshop 3, October 2016); and the rhetorical insistence of a "clean slate" (PRAS workshop 2, October 2016).

However, from my interviews and informal conversations with some government authorities involved in the PRAS in Huasco, most of them acknowledged in private the difficulties they were facing when working with local communities in a context of generalised delegitimation of political authorities, political parties, and government institutions (Ministry of Environment authority 2). Some of them also manifested their concern due to previous failed participatory attempts to address the problem of environmental pollution in the territory (Ministry of Environment authorities 2, 4, and 5). As such, municipal authorities and representatives from the Ministry of Environment often perceived the PRAS as "the last chance" for them to establish the conditions for trust between them and people in the district of Huasco (Ministry of Environment authority 4). Additionally, some government authorities expressed in private their frustration due to the "brutal inequity" (Ministry of Environment authority 4) of political power between local communities and industrial representatives in the PRAS, despite the official narratives describing it as an equal and horizontal space for citizen participation:

I think that the most difficult thing for us is to create conditions for trust, because people in general mistrust industries and the state, because they perceive there is collusion. And I understand them... we have so many examples for them to think that way! (Ministry of Environment authority 2).

We all know that our environmental regulation is permissive. And when we want to change a law, the first ones to come to lobby us are entrepreneurs, big economic powers. There is a brutal inequity. A layperson has absolutely no possibility of influencing a political decision compared with an important entrepreneur with millions of dollars for investment. So, we do have that blackmail. (Ministry of Environment authority 4).

From the perspective of supporters and members of *Brigada SOS Huasco* that were also participants in the PRAS, they often manifested their disagreement with the supposedly equal and horizontal character of the programme (social movement participant 2; local health council participant 2). During my research, they sustained their critiques in three main themes: the problems in the composition of the participants, their different understandings of what

participation is, and the structural limits of this participatory space. In relation to the composition of the table, most members of the PRAS which I interviewed referred that many representatives of civil society had little knowledge and interest in what was being discussed (social movement participants 2 and 12; PRAS participant 1). According to my participation in the PRAS, I observed that most civil society councillors and industrial representatives barely participated in any discussion, but remained in silence during the entire sessions of the PRAS. There was only one small group of civil society councillors that actively participated in the internal debates and in the drafting of documents, which I estimate were around six people, including members of *Brigada SOS Huasco*. This observation coincides with the results of an investigation on the PRAS in Huasco mentioned above, that evidenced the low attendance of ten councillors, including seven civil society councillors and three government authorities, corresponding to 40 per cent of all participants (Contraloría General de la República, 2016).

I found a very heterogeneous group of people. Some people were placed there arbitrarily, who had no intention to cooperate, who had no intention to contribute with their experience or their ideas to protect our environment, but they were placed there by institutions. They were there to accept everything that entrepreneurs said, to accept everything that government said. Working with a group of around four people was exhausting. (Social movement participant 2).

I believe most of the councillors do not know what is happening in the PRAS. I think that most of them – not all, but most of them – who are elected, lack necessary knowledge of the themes we discuss. I believe most of councillors representing civil society have contributed nothing, maybe four have contributed with observations [to the draft]. I feel that there was not a responsible assessment of what it meant to be there. (Social movement participant 13).

Most people seated there do not have the competences to be seated there. Sometimes people do not know how to read or write properly. There was not a levelling of competences, to see who could sit there, because those people had to have a high level of opinion and decision [...]. So, I think that affected us a lot, the level of preparation and handling, but also, to sit with the industries. The industrial representatives do not talk much, they sit idly by, and they realize that people do not know very much, do not know anything. (PRAS participant 01).

Members and supporters of *Brigada SOS Huasco* also referred to differences in their understandings of participation compared to government authorities' accounts. On the one hand, they considered that participation must be binding, with capacity to make decisions, and respectful of their rights to health and clean environment (social movement focus group; social movement participant 2). On the other hand, they criticised many "antidemocratic" elements

of the PRAS (Integrantes de la sociedad civil del PRAS de Huasco, 2017). Among these elements, participants frequently recalled the lack of transparency when soliciting documents, and the non-compliance by government authorities and industrial representatives with previous agreements, as described above. From my own observations, I also include among these antidemocratic elements: the arbitrariness of authorities on allocating time and order for expositions; lack of representativeness of the chief and executive secretary, which corresponded to the Major and the Regional Secretary of Environment, respectively; and systematisation bias on published documents, which I will refer to in detail in the following section:

I belong to an environmental organisation, and we have many difficulties when deciding to participate or not, because of previous unsuccessful experiences [...]. One of our most important concerns is that we have a different position from the government regarding citizen participation. We think that social participation needs to be binding, always. We are suspicious of this structured participatory model that is often imposed by governments [...]. We see participation very differently. (Social movement participant 2).

When two years ago government came with the PRAS in Huasco, many organisations had to swallow our mistrust, and we decided to participate, considering that the situation in our territory is desperate [...]. During long meetings, communities clearly presented our demands to industrials representatives and government authorities. It was an illusion of participation without real participation. We were forced to follow a predetermined scheme, and to follow rules designed for other realities [...]. Every time that we demanded the respect of our violated rights, we have been told during these last two years that we need to address these in the PRAS, as if this space frees authorities and industries of their responsibilities. This is not citizen participation, but this is a fake democratic show to perpetuate the damage, the impotence, and resignation in our territory. (Integrantes de la sociedad civil del PRAS de Huasco, 2017).

Some civil society councillors in the PRAS also manifested their criticism regarding the structural limits of this participatory space. Supporters and members of *Brigada SOS Huasco* referred to this idea using concepts such as "pacification" (social movement participant 2) and "deception" (social movement participants 2 and 12; local health council participant 2). One participant told me during an interview that the notion of "pacification" was included in their discoursive repertoire after reading the article titled "¿Participación o pacificación social? La lógica neoliberal en el campo de la salud intercultural en Chile: el caso Atacameño" (Social participation or pacification? Neoliberal dynamics in the field of intercultural health in Chile: the Atacameños case, Bolados, 2009). We read and analyzed this article together with members of *Brigada SOS Huasco* a few months before while preparing a community workshop in October 2016, as

mentioned in Chapter 6. They found that the ideas expressed in this text were very clear and appropriate for their understanding of the PRAS (social movement participant 2; local health council participant 2). Also, after the approval of the Air Pollution Prevention Programme in Huasco in January 2017, they frequently described the PRAS as a "distraction" from their more direct participation in the design and evaluation of this latter legal regulation (Social movement participants 1 and 13; PRAS participant 1):

The PRAS is a pacification table. It did not fulfil its final objective, the discourse with which we would be able to solve environmental problems [...]. Everything is 'to the extent possible', so let's not affect the economic model. Let's not affect those industries that today exist in our territories, let's not ask them too much. Let's ask them just what they can do, hoping that it doesn't affect us economically. This is the PRAS today. (Social movement participant 2).

Our concerns consist in that the PRAS does not have any legally binding mechanisms that force industries to move beyond their compliment of environmental regulations. Our agreements are not binding. We knew that from the beginning, however, acting in good faith, we participated throughout the process. Our hopes were in the Air Pollution Prevention Plan, which does have legal attributions to enforce industries to other measures. It is not fair that after years of discussion this final regulation was made behind people's back, with the evident aim of protecting local industries. (Integrantes de la sociedad civil del PRAS de Huasco, 2017).

A main consequence of the previous discussions on the ideas of democracy and legitimation, is the significant tension that the participation of a small number of members of *Brigada SOS Huasco* in the PRAS generated in this grassroots organisation. This tension, I argue, does not restrict to the participation of members of *Brigada SOS Huasco* in this specific space, but in general, it re-emerges occasionally when grassroots organisations in Huasco are invited to a multiplicity of new institutional spaces for participation. As argued in Chapter 6, all members of *Brigada SOS Huasco* whom I interviewed, mistrusted formal spaces for participation. Consequently, when government authorities generate a new space for participation such as the PRAS, communities are confronted with the decision of accepting to participate, or not. If communities decide to participate, they might end up legitimising a merely consultative programme, and which requires considerable time and effort from its members. On the other hand, if communities decide not to participate, other groups and individuals would still provide legitimacy to the new space, and *Brigada SOS Huasco* would miss an opportunity to initiate processes of education among their peers, and the possibility of legitimising themselves as an organisation, which seems to have been the case in the PRAS.

Air monitoring stations and elimination of Petcoke

As I argued in the previous section, one of the elements which can be considered as antidemocratic in the PRAS corresponds to the systematisation bias on published documents. For this, I refer to the power imbalances existing among participants in the PRAS related to the influence on drafting final documents and systematising debates within the space. In this regard, the role of systematisation in the PRAS was in the hands of government authorities through an outsourced company. For supporters and members of Brigada SOS Huasco inside the PRAS, what was written in the final documents was of utmost importance, since these documents could give them the capacity to disseminate their discussions and viewpoints beyond this participatory space (social movement participants 2 and 12; local health council participant 2). However, according to most interviewees and my own observations, often the published documents of the PRAS did not include their perspectives, or these were transcribed in a way that did not entirely correspond with the discussions held inside this participatory programme. Additionally, there were many contents in the final documents that were never discussed or approved by participants. For exemplifying this, I refer to one of the strategies discussed and included in the final document of the PRAS, which is to have updated access to air monitoring measurements in the territory.

As mentioned in Chapter 6, in the district of Huasco there are eleven air monitoring stations. Ten are owned and maintained by Guacolda and CAP Minería (Sistema de Información Nacional de Calidad del Aire, 2018). One of them, monitoring station Huasco Sivica is property of the Ministry of Environment (Sistema de Información Nacional de Calidad del Aire, 2018). Despite state regulations that dictate the technical characteristics of their location and upload of data (Ministerio de Salud, 2008a), many of these monitoring stations are placed in areas that do not comply with Law. For example, monitoring station SM3 in Huasco Bajo is under trees, and monitoring station EME F in Huasco is covered by a building, affecting the validity of their measurements. This situation is frequently evoked by local communities to government authorities, receiving no answers. Similarly, monitoring data is not updated and accessible, as required by government regulations, despite the fact that Huasco is a latent area for air pollution. In regard to this, government authorities in the PRAS always maintained that the information was complete and online, and thus the problem was that people could not understand this. I personally attempted to access to this information through the Air Quality National Information System (SINCA, in Spanish), and the most recent information available was from 2012, despite the claims of government officials that it was updated hours ago.

On one occasion, invited by small farmers and olive growers to a meeting with regional environmental and agriculture authorities in Huasco Bajo, I publicly had to address this problem to the Regional Secretary of the Ministry of Environment in Atacama, after he insisted that the information of air monitoring stations was online, despite the evident fact that it was not (field note 27). Furthermore, I requested the data through official mechanisms of transparency from the Ministries of Health and Environment in April 2017. After forty days, both of these institutions recognized that they did not have the data because local industries do not share it with them (Regional Health Authority, personal communication, June 2017; Regional Environmental Authority, personal communication, June 2017). Despite this, in the final document of the PRAS, the problem can still be read as follows: "Although information regarding air quality is available in the SINCA, this is not easily understood by citizens" (Ministerio del Medio Ambiente, 2017c, p. 58).

Another element that can exemplify the tensions inside the PRAS was the commitment of Guacolda thermoelectric plant to eliminate the petcoke from their industrial processes. This happened in the session of May 31, 2016, as recorded and appearing in the official acts, and frequently remembered by social movements participants, and even prompting the drafting of a public declaration (Integrantes de la sociedad civil del PRAS de Huasco, 2016). On this occasion, a representative of Guacolda thermoelectric plant announced the elimination of petcoke - a known carcinogenic agent to humans (International Agency for Research on Cancer, 2010) -, one of the most pressing demands from local grassroots organisations, as I described in Chapter 3. Soon after this announcement, the news spread among local communities, as we can read in El Noticiero del Huasco local newspaper. It is interesting how three different articles express three different positions and emphasis on this announcement. The first one comes from an interview to the Mayor of Huasco, pointing out the importance of the PRAS, and the efforts the Municipality had made many years ago for solving this problem ("Loyola por anuncio de Guacolda: esto demuestra que las cosas se pueden hacer", 2016). Another position comes from Guacolda itself, emphasizing their commitment to Huasco community, their strict compliance to environmental regulations, and their investment efforts for environmental protection during recent years ("Guacolda anuncia retiro de uso de petcoke", 2016). And also, there is the narrative of civil society representatives, that highlight the role of social struggle and pressure, but also denounce that the elimination of petcoke was conditional to the expansion of Guacolda thermoelectric plant production ("Sacar el petcoke no puede ser a cambio de aumentar la producción", 2016b).

The concealment of this condition by industrial representatives prompted open criticisms among civil society councillors in the PRAS. Soon after that representatives of *Guacolda* thermoelectric plant were publicly anouncing this measure as a notable result of the PRAS, they were submitting their request for increasing their production to the Regional Environmental Commission in Atacama (Guacolda Energía, 2016). This also prompted condemnation by some government authorities involved in the PRAS, yet these remained outside public discussion, and only disclosed in private during their interviews:

Sometimes I am annoyed by the indolence of industries, indolence of not doing enough. And it has been so hard to develop trust. This has been a long process, and very fragile, and often trust is lost again. To me, what *Guacolda* did was enormously silly. To have done that back to the people, I think that was an enormous strategical mistake. I think they should have never done that. (Ministry of Environment authority 2).

When the manager of *Guacolda*, in one of the meetings of the PRAS announced that they will gradually remove petcoke use, it was an enormous joy, a collective happiness and an important milestone. But it didn't last for long. Soon after, the industry conditioned the removal of petcoke to the approval of an increase in 24 MW production [...]. For us, this meant a low blow, no doubt of it, and it validated our initial mistrust. (PRAS workshop I, October 2016).

Environmental pollution versus economic development

A frequent theme that appeared throughout my fieldwork was the tension between environmental and health protection, and economic development and employment, as discussed above, and in Chapters 5 and 6. In the PRAS, different discourses articulated and clashed around what has been widely argued elsewhere, i.e., that environmental pollution affect people's health, and that Chilean environmental pollution regulation is far from complying with WHO recommendations on this matter. In order to provide an intelligible narrative in this section, I will describe how industrial representatives, government authorities, and members of *Brigada SOS Huasco* referred to the aforementioned premises.

Industrial representatives from CAP Minería and *Guacolda* thermoelectric plant, and some government representatives, often relativized and underestimated the health impacts of environmental pollution, despite international evidence about this issue, as mentioned in Chapter 3. In May 2016, three months before my fieldwork begin, I was invited to one of the

PRAS sessions, as a professor at the Department of Public Health from the University of Valparaíso, to present evidence of the health impacts of environmental pollution to communities in Valle del Huasco (Hadjez, 2016). Also, a representative from the Regional Secretary of the Ministry of Health in Atacama presented recent epidemiological information from the district of Huasco. Both of us coincided in the increase of cancer and cardiovascular mortality rates in the territory during the last decade. However, workers from the Ministry of Environment and industrial representatives from CAP Minería dismissed these results because of the statistical problem of small numbers, not recognizing the ample evidence published on environmental pollution and health problems. This led them to question existing results and, in a contradictory way, insisted on conducting more studies about this problem in the district of Huasco, neglecting local information and updated evidence from international organisations.

In a more elusive way during ordinary PRAS sessions, government representatives acknowledged that environmental pollution could be related to some health problems, but insisted that the evidence for this is inconclusive. Furthermore, they also maintained that there is no categorical information about health problems related to environmental pollution in the district of Huasco. Once, the Regional Secretary of the Ministry of Environment in Atacama claimed that "there are some studies that might show increase in some respiratory problems, but these studies are not conclusive" (field note 27). Due to the absence of other health professionals or health authorities during the sessions I attended, I was compelled by some of the community representatives to point out the evidence supplied by the WHO, national research on the subject, and local epidemiological data which I detailed in Chapter 3. Additionally, after working with local communities in a community workshop, we formulated a paragraph for the final PRAS document, reviewing all published evidence about health problems in Huasco, and more general information about the relationship between environmental pollution and health problems. Although it was included in the final document - not without some level of pressure from members of Brigada SOS Huasco - it was labelled under the title of "community perceptions" (Ministerio del Medio Ambiente, 2017c, p. 57).

The relativisation of the evidence regarding environmental pollution and health by government authorities can also be exemplified in a paragraph about petcoke use in the final PRAS document. In it, we read that "it is necessary to assess the impact of petcoke combustion on people's health. In case it affects people's health, we need to eliminate its use" (Ministerio del Medio Ambiente, 2017c, p. 49). According to members of *Brigada SOS Huasco*, the final PRAS document disregarded published literature on the detrimental effects of petcoke on people's

health, as detailed in Chapter 3 (social movement participants 1 and 2; Integrantes de la sociedad civil del PRAS de Huasco, 2016). It also caused them indignation since it was published more than six months after the Regional Environmental Commission in Atacama approved *Guacolda* thermoelectric plant's requirement for the elimination of petcoke use, and its increase in production, as it was mentioned above (Comisión de Evaluación Ambiental de Atacama, 2017).

Moreover, government authorities frequently used euphemisms for referring to environmental pollution. During my fieldwork, the most common euphemisms were "externalities" (Ministry of Environment authorities 1 and 2), "industrial impacts" (Ministry of Environment authority 4), or "environmental inequality" (Ministerio del Medio Ambiente, 2017c, p. 7), among others. Similarly, they usually overlooked environmental pollution as a "perception" from local communities (Ministry of Environment authorities 2 and 3; Ministerio del Medio Ambiente, 2017c, p. 49). On one occasion, I discussed this observation with one of the coordinators of the PRAS. Specifically, I asked her if the PRAS was implemented because there is pollution, or because there is a community perception of pollution. She answered:

It is very complex, because when you talk about pollution, for judicial aspects, you have pollution every time you exceed a regulation. If the regulation threshold is not exceeded, you cannot talk about pollution. Therefore, I think that here there is an important component of community perception. People feel they have pollution. Many times, we refer to it as impact, non-desirable effects, to avoid the concept of pollution. (Ministry of Environment authority 2).

Together with the relativisation of the relationship between environmental pollution and health problems, government authorities emphasised the importance of economic development and job creation in the district of Huasco. For this, they also manifested a dichotomist approach between environmental protection and economic development, in that "it is a dichotomy that we need to acknowledge, because if we have more strict regulations, we will impede the development of certain economic activities" (Ministry of Environment authority 2). The articulation of this theme coincides, to a certain extent, with industrial representatives' narratives, as described in the first section of this chapter. However, contrary to entrepreneurs organised in CORPROA, who perceived among grassroots communities the presence of "hotheads" ("Trabajemos en conjunto y construyamos una nueva Atacama, 2014) and "radicals" ("Empresarios piden garantías para reiniciar proyectos", 2014), most government officials recognised in those communities that oppose to industrial projects in the region people with "environmental consciousness" (Ministry of Environment authority 4), and "empowered" (Ministry of Environment authority 2), that do not fall into local industries blackmail.

People are more aware. Today, people are unwilling to be blackmailed by industries when they are told that they would have more employment. Before, people would have said: ok, we need more employment. Today in the province many people would prefer to be unemployed, but to be able to protect their children from environmental pollution. I think this is the concept of 'sustainable development'. I think that lay people understood this idea better than industries and the state did. (Ministry of Environment authority 4).

In contrast, supporters and members of *Brigada SOS Huasco* in the PRAS articulated narratives that are far more complex than usually portrayed by government authorities and industrial representatives. On the one hand, they acknowledge the necessity of economic development and employment creation in the province, because "people need to work, need to have a pot with food in their table" (Social movement participant 3). Some of them also expressed their empathy for current workers in these industries, and the need to consider their particular situation in their environmental struggles (Social movement participants 3 and 4). However, they insist that economic development must be sustainable and respectful of the natural environment and local communities: "We do need economic development, but not this way" (Social movement participant 12). In this regard, they denounce the short-term vision of provincial entrepreneurs and political authorities, and the disastrous environmental consequences of industrial activities in the province, as explained in detail in Chapter 3. Additionally, they also criticise the role of government authorities for their responsibility in the environmental situation of Valle del Huasco:

It is very easy to say no to an industry. But what do we offer, as a social movement, to the people? Do we offer them job positions? It is very easy to reject industries when you have a [higher education] degree. It is very easy to speak against them, but we need to understand the workers from these industries [...]. We need to be emphatic, we have lost empathy within the social movement. I have a job, I have means to live, but I also need to think of my neighbours (Social movement participant 4).

This people only want to profit as fast as possible, not thinking in the medium or long term [...]. I don't have any problem if an industry comes here and contributes to the people, and uses technology for not polluting the environment [...]. But our entrepreneurs, in general, tend to seek the highest profit in the short-term, and that is wrong. That is unsustainable, and we have to do something, we cannot let them do this. (Social movement participant 5)

"Hotheads", barricades, and structural violence

As I argued in the first section of this chapter, industrial representatives in the region organised in CORPROA, often referred to members of socioenvironmental movements in Valle del Huasco, such as *Brigada SOS Huasco*, as "hotheads" ("Trabajemos en conjunto y construyamos una nueva Atacama, 2014), "minorities" ("Las potencialidades del Valle están, pero debemos saber cuándo", 2015), and "vandals" ("Empresarios piden garantías para reiniciar proyectos", 2014). Similarly, other community organisations that supported the return of suspended projects in the province, including *Freirina Esperanza*, also depicted participants as "delinquents" ("La dura realidad de los ex trabajadores de Agrosuper", 2013), "stubborns" (Godoy et al., 2007), and "anarchists and extremist groups" ("Empresarios locales esperan que se reactiven grandes proyectos de inversión", 2014f). Narratives from these actors also represented supporters and members of these grassroots organisations as incapable for dialogue ("Aumenta la preocupación por cifras económicas de Atacama", 2014; Godoy et al. 2007), inherently violent, and motivated for political and economic reasons (Corporación para el Desarrollo de la Región de Atacama, 2016; "Presidente de SONAMI pide cambiar leyes para evitar judicialización de proyectos", 2017).

Contrasting with the aforementioned ideas, members of Brigada SOS Huasco and other grassroots organisations in Valle del Huasco did not only reject these expressions, but also they resignified what is often considered as violence. During the focus group with members of the organisation, one of them said that many people from outside their territory were initially afraid of them, but later, "when they meet us, they realise we are not violent. We just defend ourselves, nothing else" (Social movement focus group). Another participant of Brigada SOS Huasco maintained that "we are not violent people, otherwise, we would always be in a barricade, throwing stones, or destroying things. We are just human beings, calm, and peaceful. We love our life, our land, our families" (social movement participant 13). These narratives also coincide with my own observations of grassroots organisations in Valle del Huasco. In this regard, supporters and members of Brigada SOS Huasco, Asamblea de Freirina, and Asamblea por el Agua de Guasco Alto, not only never advocated for violence during their discussions, but they condemned the violence exerted by security forces of Carabineros in their territory (Movimiento Socioambiental del Valle del Huasco, 2013c). In addition, they also denounced what they considered structural or "silent" forms of violence from government institutions and industries in Valle del Huasco (social movement participant 1):

In Huasco, there is a silent violence that has been exerted for more than 40 years. Industries and our authorities have been killing us in silence. So, before referring to the direct-actions from people in our territory, we need to address these economic and political forms of violence. (Social movement participant 1).

Politicians are the violent ones. Violence comes from them. I do not accept violence, in any form. But tell me, what is more violent, the industries slowly killing your loved ones, or people taking to the streets to protest? Tell me, what is more violent? (Social movement participant 2).

Look, we have analysed them too [entrepreneurs and politicians], as they analyse us. They say we are "terrorists", "violence advocates", "black sheep". But they don't consider themselves neither terrorists nor violent. But they are. And they dare to think that we need to learn how to listen! Well, anyways, we really don't care. Specially now because they are so disgraced [...], no one believes them (Social movement focus group).

As mentioned above, some interviewees from *Brigada SOS Huasco* also resignified elements that are often considered expressions of violence, such as the barricades and the stones. In the case of the barricades, for most members of *Brigada SOS Huasco* and other grassroots organisations in the territory, these represented a space for encounter, solidarity and unity (social movement participants I and 8; social movement focus group). Barricades also evoked collective memories of resistence and struggle. According to one of them, "the name *Movimiento Socioambiental del Valle del Huasco* emerged in the middle of the barricades, when people from the Andes Mountains came down, and people from the coast came up, and we all meet in Freirina" (social movement participant 7). During my preliminary fieldwork in 2014, I could also observe how barricades were spaces where families met and shared food, hot drinks, and where they vividly discussed political contingency (field note, January 2014). Furthermore, recalling the organisation of barricades during the Battle of Tatara in Freirina, as described in Chapter 3, one participant of *Brigada SOS Huasco* declared that:

Barricades were so beautiful! A space for encounter where ladies, housewives that never left their homes, meet there for weeks. There, they did not need to iron, or to wash clothes. We just cooked together, we told jokes, we told stories while drinking *mate*, while singing. Even we run a contest for the barricade queen [laughs]. It helped us to be united, to meet among neighbours. (Social movement focus group).

Similarly, for many supporters and members of *Brigada SOS Huasco*, stones represented the most basic means for resistance and self-defence. Many interviewees described how throwing

stones corresponded to a first moment in a progressive repertoire of collective struggle. For some members of *Brigada SOS Huasco* and *Asamblea de Freirina*, throwing stones also represented the moment when they started losing fear, as I described in Chapter 6. During the Battle of Tatara in Freirina, one neighbour, who never expected to participate in protests, expressed: "imagine the repression we faced! Imagine what we had to do to defend ourselves! First, we had only stones, and later we begin to understand that we had to do other things" (Social movement participant 6). Another neighbour also remembered that "we had to learn how to throw stones. My husband taught me here in our home, and he used to say to me: this way, not this way. We even learnt how to throw them with our shoelaces [laughs]" (social movement participant 7). Because of the geographical characteristics of Valle del Huasco, which can be described as a very rocky terrain, many interviewees referred that stones also constituted an element people could identify with. During the first anniversary of Battle of Tatara, members of grassroots organisations declared "one year ago, armed only with stones, we showed to the corporate power that this is our land, and here, our community decides and is sovereign" (Movimiento Socioambiental del Valle del Huasco, 2013c)

Outsourcing of participation

During my fieldwork, one of the first things that called my attention was the external agency organising many of meetings and activities in relation to the PRAS. According to its regulation, this was an "external technical agency" in charge of delivering participative methodologies (Ministry of Environment authorities I and 2; Ministry of Environment 2015). Previous to my fieldwork, and according to presentation slides and meeting minutes, these participatory methodologies included: problem tree, SWOT analysis, brain storming, and needs prioritisation, among others. From my own participant observation of the PRAS, the external technical agency provided some facilitators for community workshops during the public consultancy phase, and it was responsible for the design and distribution of merchandise and official publications, the coordination of community workshops, coffee breaks, and the systematization of final documents. In general, there were around three visible workers during the PRAS, and none of its members actively participated in discussions.

Some councillors from civil society expressed their mistrust towards this external technical agency, both because of a previous experience with another external agency for the PRAS that did not delivered expected products, as it was denounced by members of the PRAS in

Quintero-Puchuncaví (Dunas de Ritoque, 2016), and because of serious doubts about the transparency of the tendering process for the contract. Specifically, participants of the PRAS condemned its direct contract without any public bid, their lack of expertise and technical competence, and the consultant role of the then Subsecretary of Environment, Marcelo Mena, to this external agency, as it was established in an investigation by the Comptroller General of the Republic (Contraloría General de la República, 2016). In addition, supporters and members of *Brigada SOS Huasco* perceived that the present external technical agency did not understand the local context and the historical development of their demands. One of the documents from civil society councillors argued that these subcontracting external agencies had "few technical competences, [and] never understood why this community was fighting for" (Integrantes de la sociedad civil del PRAS de Huasco, 2017). Furthermore, in one of the community workshops held in September 2016, one of the councillors said:

Politicians hire external consultancies that do not understand what happens in this community. Therefore, it is an arduous work for us because first we need to explain them what all is about, and then they provide us training or orientation that is not what community wants nor what community needs (PRAS meeting, September 2016).

An example of this was the night before the first community workshop of the PRAS in September 2016. In that occasion, a member of the external technical agency was calling civil society councillors around 23:00, for reminding them and confirming their attendance the next day. What was hilarious for participants of the PRAS was that the person calling was asking if they had a contact number of Mrs. Guacolda, when they were in fact referring to the *Guacolda* thermoelectric plant.

Chapter 8: Discussion

In this chapter, I develop a coherent and integrated account of collective participation in health in Valle del Huasco relating empirical research findings, and the broader theoretical revision, research context, and research methodology. For this purpose, I revisit the research questions posed in Chapter 3. In the first section, I discuss the role of participatory spaces within health centres in the district of Huasco, in a context of environmental conflict. I summarise the main characteristics of local health councils, the most relevant spaces for participation within health centres, and I argue that their role can be considered, in general, as subordinated to health workers' requirements, and often legitimising industrial activity. In the second section, I address the question of how these spaces for participation interact with social movements in the territory, in particular Brigada SOS Huasco. Here, I describe how the emergence of social movements in Valle del Huasco can be related, to a certain extent, to the significant limits of institutional spaces for participation. I propose that this interaction is characterised by mistrust and conflict among participants, which further justified the emergence of a new space for participation, i.e., the Programme for Environmental and Social Recovery of Huasco, PRAS. In the third section, I discuss the influence of socioeconomic conditions on formal spaces for participation in health and social movements in Valle del Huasco. In the fourth section, and after providing responses to the research questions, I discuss what I consider the contributions of the study of social movements to the fields of community participation and public health.

What has been the role of participatory spaces within health centres in the district of Huasco, in a context of environmental conflict?

According to my research, the most important spaces for citizen involvement in health care centres in the district of Huasco correspond to local health councils, both, in the primary health care centre Juan Verdaguer, and in the community hospital Manuel Magalhaes Medling. These formal spaces for participation were gradually established in the context of the implementation of the family and community health care model since the late 1990s, and further consolidated by a series of legal regulations, including the Ministry of Health Exempt Resolution 31 that regulates citizen participation within public health institutions (Ministerio de Salud, 2015c) and Law 19,813 that includes citizen participation as a health-related goal among primary health

care centres in the territory (Ministerio de Salud, 2007a). Furthermore, the national health promotion strategy of Healthy Cities, Municipalities, and Communities (Ministerio de Salud, 2015b), also promotes community participation in health through the formulation of a three-year participatory health plan within the primary health care centre Juan Verdaguer. It is safe to say that most legal regulations for community participation in health in the district of Huasco are focused on primary health care, while participation in the community hospital Manuel Magalhaes Medling depends on more general national guidelines on the subject, such as the Exempt Resolution 31, introduced in Chapter 3 (Ministerio de Salud, 2015c).

Community members of local health councils in Huasco are mostly elderly women, who frequently participate in other formal community organisations in the territory such as neighbourhood councils, elderly associations, and health volunteers' groups, among others. Many of their members have a long record of participation, with little turnover among their organisations and directive boards. In general, these spaces for participation do not include young people, who are usually criticised for their lack of interest in these organisations. This observation was further confirmed with regional health authorities, who affirmed that this situation is common to most local health councils in the region. Participants in local health councils in the district of Huasco described themselves as "impartial and non-political" (local health council focus group 1), and manifested the importance of procedural aspects of participation, and the endorsement of institutional channels for addressing their demands. In general, they disregarded any disruptive, non-institutional mechanisms for this purpose. However, during interviews and informal conversations, some of them manifested their exhaustion toward political authorities and formal spaces for participation in their territory, and even expressed their support to local grassroots organisations such as Brigada SOS Huasco. I will refer to this in detail below.

Local health councils in the district of Huasco are spaces where community representatives participate in annual local health assessments, which in the case of the primary health care centre relates both to the health-related goal associated to participation (Ministerio de Salud, 2007a) and the formulation of a participatory programme within the National Health Promotion Plan (Ministerio de Salud, 2015b). During these annual local health assessments, community members provided their perceptions of the most pressing collective health problems in the territory, and discussed strategies for addressing some of these. For the period 2016–2018, participants discussed and formulated strategies for addressing childhood obesity and overweight (Consejo de Desarrollo Local de Salud, 2017). Local health councils also seem to facilitate

communication between health workers and local communities, especially for dealing with problems of health care attention for the elderly. Regularly, participants of local health councils applied for external funding to improve health infrastructure and acquire clinical supplies according to health workers' and communities' perceived needs. Most of the time, these external funds come from local and provincial industries that are largely responsible for the environmental pollution in Valle del Huasco, as explained in detail in Chapter 3.

In general, participatory spaces within health care centres in Huasco do not differ from previous research findings in other territories during the periods of transition to, and consolidation of democratic capitalism in Chile, as described in Chapter 3. Local health councils within the primary health care centre Juan Verdaguer and the community hospital Manuel Magalhaes Medling, can be characterised as depoliticised spaces, referring to the relatively isolated and fragmented narratives expressed by their members in relation to their health demands. Participants' accounts on health problems in the territory usually revolved around individual and family responsibility, and often failed to articulate their relationship with broader socioeconomic and environmental conditions in their territory, such as unemployment and environmental pollution. Also, most participants of these spaces explicitly avoided any type of conflict with health workers and other political authorities, for them to work in their projects with no difficulties. These research findings coincide with Greaves (2004, 2007) and Paley's (2001) account of depolitisation as a main characteristic of participatory spaces within municipalities and health care centres in Santiago de Chile. I argue that one reason that can relate to the fragmented narratives of health and health care within local health councils in the district of Huasco is the predominance of a biomedical model of health, which focuses mainly on biological factors and excludes psychological, environmental, and social influences on health, among health workers and community participants. Another reason is the utilisation of participatory methodologies within health centres that promote a more immediate and relatively partial approach to health problems.

According to regional health authorities and health workers, another trait of local health councils in the district of Huasco is their eminently formal and instrumental character. From the perspectives of most health workers interviewed, local health councils were maintained, fundamentally, because of the economic incentives associated to their functioning, which represent around 12 per cent of their base remuneration, in accordance with Law 19,813 (Ministerio de Salud, 2007a). As such, work with local communities usually corresponded to the minimum requirements established by regional health authorities, and few workers were

involved in these formal participatory spaces. This situation, however, did not seem to be exceptional, but it could represent the predominant approach to their daily clinical practice, in a context of considerable financial constraints and work overload. In relation to health workers' performance, regional health authorities manifested difficulties in the evaluation of their community work, which appeared to be overly reliant on simple empirical techniques such as photographs and participant lists, together with the minuting of meetings, reinforcing the merely formal and tokenistic character of these spaces. Similarly, regional health authorities suggested that occasionally, health workers perceived participation as a "nuisance" (regional health authority 2), and when participation went beyond the merely formal aspect, they could also perceive it as a "threat" to their professional practice (regional health authority 3).

The instrumental character of local health councils could also be related to their relative subordination to health workers' requirements for applying to external funding for improving health infrastructure, and for acquiring clinical supplies, as mentioned in Chapter 5. As such, in a context of limited economic resources, as it is the case of public health centres in the district of Huasco, local health councils constitute key actors for improving health care attention in the territory, at least in the short term. However, these health improvements implied the development, on the long run, of dependency on external funders, most of which are the provincial industries responsible for environmental pollution. This observation is consistent with other research findings that suggest participation in health often constitutes a neoliberal mechanism for promoting self-help and reducing demands on public health services, in a context of gradual financialisation and reduction of state responsibilities since the neoliberal transformations in the early 1980s (Bolados, 2007; Gideon, 2002; Paley, 2001). Furthermore, Gideon (2002) and Paley (2001) suggest that community participation inside health care centres could also contribute to the consolidation of neoliberal policies within the health sector, by buffering the negative direct effects of the reduction of health services on the general population, as seems to be the case in the district of Huasco.

From a theoretical perspective, the depoliticised character of local health councils in the district of Huasco, i.e., the fragmentation of their health problems, the isolation of health demands from broader socioeconomic conditions, and to a certain extent, the avoidance of any type of conflict, contrast to what Brown et al. (2011) refer to as a politicised collective illness identity. As described in Chapter 2, a politicised collective illness identity implies a gradual understanding of health problems as shared, deep-rooted in socioeconomic unequal conditions, and the recognition of conflicting interests within society (Brown et al., 2011; Brown et al., 2004).

Today, it seems reasonable to propose that members of local health councils share similar experiences of illness and access to health care, but their discussions and common narratives within these spaces often remain at this level. According to their interviews, focus groups, and document revision, most of them address more immediate health problems, and neither perceive nor elaborate on the existence of conflicting interests within society that could explain health inequalities. However, a small group of them did manifest, mostly during personal and informal conversations, an increasing awareness of how their interests were usually in conflict with local political authorities, and industrial representatives.

From the broader comprehension of collective action as a cultural practice (Álvarez et al., 1998), I argue that local health councils in the district of Huasco did not articulate alternative representations in relation to those worldviews prevailing in the territory. Local health councils often seemed to reproduce and legitimise existing discourses and institutions. In this regard, I could recognise three broader discourses that were frequently articulated by these participants: the "biomedical" discourse, the "participation and democracy" discourse, and the "economic development" discourse. First, I suggest that local health councils contribute to the reproduction of the biomedical discourse, through emphasising biological causes and individual responsibility as the main explanations for health problems in the territory. Second, members of local health councils tended to accept as legitimate only those institutional definitions and practices of participation and democracy. As such, they disregarded as illegitimate any disruptive attempt to address their demands. Third, I argue that most participants legitimise current discourses and practices from provincial industries, by reinforcing their narratives of social responsibility, sustainable development, and modernisation, not to mention the establishment of economic dependency and clientelistic relations. Consequently, I suggest that local health councils in Huasco tended to negotiate their relative situation within existing power relations, which, as I have argued throughout this thesis, are highly asymmetrical and exclusionary.

Despite the broader recognition of environmental pollution as a major problem for local communities in the district of Huasco (Consejo de Desarrollo Local de Salud, 2016, 2017; Secretaría Regional Ministerial de Salud de Atacama, 2016), and the rhetorical emphasis of the national health promotion plan on social determinants of health and intersectorality (Ministerio de Salud, 2015b), neither local health councils nor health workers have addressed environmental health in the territory. Research findings suggest that one of the main reasons for the absence of any type of response within local health councils relates to the economic dependency of the local population and health care centres on the industries in Valle del

Huasco. On the one hand, electricity generation and mining industries in the territory provide direct employment for around 20.8 per cent of local labour force. They also contribute to an even larger proportion of employments through indirect services (Ministerio de Desarrollo Social, 2015). In general, labour force in the district of Huasco is characterised by its precariousness, with a high percentage of non-qualified workers, and high variability in employment rates, which are persistently higher than in the region and the country, as explained in detail in Chapter 3 (Instituto Nacional de Estadísticas, 2018; Ministerio de Desarrollo Social, 2015). I argue that these structural conditions were extensively manifested in participants' anxiety of losing job positions within their families, and the acceptance of the detrimental environmental impacts of local industrial activity.

On the other hand, health centres in the district of Huasco also receive direct funding from provincial industries, and indirect funding through local health councils. Albeit I could not estimate private funding to health centres in the territory due to lack of information and comparable data, it seems to correspond to a significant amount (Arellano & Albert, 2017). From the interviews held with health workers, and document revision on this subject, it is safe to say that local industries play an important economic role in the public health sector in Huasco. This structural dependency is manifested in regional health authorities, health workers and local health council narratives, as a pervasive and uncomfortable relationship which many of them attempted to omit in their everyday professional activities. The establishment of this relation of economic dependency on local industries, can be related to the gradual reduction of state responsibilities, and the consequent economic constraints that affect public health services in the territory. In consequence, I argue that these conditions contribute to the silence of local health councils and health workers regarding environmental pollution in the district of Huasco, since "unfortunately, those industries that are polluting the environment are the same that provide for municipal resources" (health worker 4).

Another reason for the absence of any type of response within local health councils and health workers regarding environmental health in the district of Huasco, seems to correspond to the pre-eminence of the biomedical model of health, as it has been suggested above. I argue that the reproduction of the biomedical discourse prevents them from conceptualising their professional and community practice beyond traditional narratives of health, disease, and health care. Additionally, the current utilisation of participatory techniques that focus on fragmented and relatively isolated health problems lacks consideration of broader socioeconomic and environmental conditions in the territory. Most of health workers acknowledged their lack of

competences for addressing environmental health within their routine professional activities. According to regional health authorities, this situation was the common scenario in the region and the country. In this regard, I propose that addressing environmental health, which is essentially a collective health problem, would imply to develop increasing levels of abstraction among health workers and community members, and therefore, could prompt the development of a politicised collective illness identity (Brown et al., 2011), as described in Chapter 2. In recent years, a small group of professionals at the Regional Secretary of the Ministry of Health in Atacama have attempted to conduct annual training workshops on environmental health for primary health workers in the region. This is an unusual and relevant initiative that requires closer attention and support.

An unanticipated finding from my fieldwork, is that underlying the depoliticised character of local health councils, and to a certain extent health workers, it is possible to recognise fear as a powerful individual and collective emotion among community participants, both related to conflict with government authorities, and potential economic consequences from provincial industries. It seems to me that it is fear, and not a primary inability to develop a gradual process of abstraction, that impedes members of local health councils from looking at socioeconomic and environmental conditions in their territory. In fact, some of them acknowledged this situation: "most of our families work in the pelletizer plant and in the thermoelectric plant. That is why people do not talk, stay quiet" (local health council focus group, 2014). Other participants recalled past experiences of threats of job losses, and authoritarianism from local political authorities during the periods of transition to, and consolidation of democratic capitalism. One of the participants manifested that "if the company caught you [protesting], you were placed on the black list" (local health council participant 3). Elgueta (2013) also confirms these narratives in his research, in which he devotes an entire chapter titled "Juan Sabando Santibañez: the capture of the local government by the industries in Huasco (1996-2008)" (p. 151).

However, in some members of local health councils, it is possible to discern some level of contestation, and the expression of a tension in a context of increasing citizen delegitimation of democratic institutions and political authorities in Valle del Huasco. Bolados (2009) and (Gideon, 2005) have described resistance strategies within these institutional spaces for participation: open rejection to participate in formal spaces, demands for political inclusion, and the challenge of prevailing understandings of participation, democracy, and health care. In this research, I describe not a process of resistance, but what I consider a more essential

emotional process of uneasiness among community members and health workers, that requires further attention and research. This might coincide with the broader process of delegitimation of political authorities and institutions in the country, as Garcés (2012) has suggested. Moreover, I argue that this process relates to the emergence of social movements in the territory, as expressed in the rejoicing of some members of local health councils during the recent protests of *Brigada SOS Huasco*, as I describe in more detail in Chapters 5 and 6. As such, I point to the historically contingent character of local health councils, in dialectic articulation with broader transformations of political and environmental conditions.

How do local health councils interact with social movements in Valle del Huasco?

Most health workers and members of local health councils in this research positioned themselves at distance from disruptive action and informal organisations such as Brigada SOS Huasco, and the broader Movimiento Socioambiental del Valle del Huasco. Their discourses about these organisations are, to a certain extent, similar to those critiques articulated in Corporation for Economic Development in Atacama (CORPROA), the main industrial association in the region, as explained in Chapter 7. These critiques were directed toward the informal character of these grassroots organisations, and their decision to channel their demands through noninstitutional mechanisms, contrasting with local health councils, neighbourhood councils, and elderly associations. Members of local health councils also criticised their disruptive and seemingly violent strategies for addressing their social demands, especially evoking the massive mobilisations in Huasco and Freirina in 2012. In addition, participants of local health councils expressed their concern for the economic consequences of these mobilisations, and their effects on unemployment rates in the region and province. However, as described above, some members of local health councils and health workers in the district of Huasco recognised the importance of these informal grassroots organisations such as Brigada SOS Huasco, but they mostly expressed this during informal conversations and in private during this research.

From Žižek's (2009) theoretical contributions on violence, it is possible to suggest that local health councils in the district of Huasco correspond to post-political spaces for participation in health. As described in Chapter 3, post-political spaces refer to those organisations that explicitly claim their detachment from any political or ideological position, but self-reference as interested in a neutral management of resources (Žižek, 2009). Local health councils, as post-political

organisations, would assume that the existing social order corresponds to a non-violent state of society, from where any deviation is seen as disruptive and violent, and therefore rejected. This corresponds, according to Žižek (2009), to the common sense recognition of subjective violence as the only type of violence in society. Considering the absence of narratives that associate perceived collective health problems to broader socioeconomic and environmental conditions in the territory, I suggest that participants involved in local health councils in Huasco are, to a certain extent, unable to articulate as violent or illegitimate the existing situation in Valle del Huasco. In other words, objective violence, both symbolic and structural, is concealed for them (Žižek, 2009). As such, the significant influence of economic elites on political processes, the degradation of the environment, and collective health problems derived from environmental pollution in the territory would be considered somewhat inevitable and normal.

In contrast, *Brigada SOS Huasco* disrupts this zero non-violent level, by precisely pointing to the objective violence underlying the normal state of things. As described in Chapter 6, *Brigada SOS Huasco* is a grassroots organisation in Valle del Huasco, dedicated to the protection of collective health and the environment. It disseminates information about environmental health among local communities, and denouncements political authorities for what its members consider their responsibility for the adverse environmental situation of Huasco. *Brigada SOS Huasco* was created around 2010, but many of its members and practices go back to the first collective efforts for the protection of the environment in the early 1990s, mainly supported by local olive growers (Elgueta, 2013). In general, *Brigada SOS Huasco* is characterised by its informal and horizontal organisational structure, and the utilisation of more direct-action strategies for addressing their demands, such as community workshops, mural paintings, radio programmes, and protests, among many others. This grassroots organisation is also part of *Movimiento Socioambiental del Valle del Huasco*, which during my fieldwork, also included *Asamblea de Freirina*, and *Asamblea por el Agua de Guasco Alto*, in Alto del Carmen.

As suggested above, *Brigada SOS Huasco* denounces both the symbolic and structural violence present in the current socioeconomic and political conditions in Valle del Huasco. I argue that their denunciation is intimately related to their process of politicization, in contrast to what Žižek (2009) refers to as a post-political politics. Politicisation, I suggest, corresponds essentially to look inwards, to perceive the structural violence of everyday life. In the case of members of *Brigada SOS Huasco*, this process emerges from their daily experiences of shared suffering due to the environmental conditions in their territory, as I discuss in detail in Chapter 6. However, it also implies increasing degrees of abstraction, since structural violence cannot be grasped

directly as an observable phenomenon. In this regard, their shared experiences of illness, of death, and pain, constitute the "clues to underlying structures and relationships which are not observable other than through the particular phenomena or events that they produce" (Gunvald & Cox, 2013, p. 73). The denunciation of objective violence also implies the delegitimation of existing political and economic institutions, due to their inherently violent character. By delegitimation, and consistent with the previous idea of politicisation, I refer to the emergence of a broader common narrative that understands collective health problems not as isolated, but as the result of an unjust social order. As such, *Brigada SOS Huasco* constitutes a space for politicisation for its participants, referring mainly to a gradual understanding of the broader causes that relate to health in their territory. As explained before, this is consistent with the notion of politicised collective illness identity (Brown et al., 2011).

In a more abstract level of analysis, I suggest that Brigada SOS Huasco's demands for the protection of their collective health, their lives, and their environment, are expressing, as a displacement, an underlying conflict among antagonist social groups. In this sense, the cultural struggle for health, life, and the environment is eminently a political struggle, unfolded in terms of collective health and environmental protection, as I argue in Chapters 6 and 7. This political struggle, which is cultural at the same time (Álvarez et al., 1998; Barker, 2013; Gunvald & Cox, 2013), involves different social groups which share, in essence, similar representations of health, illness, and health care (Samaja, 2004). From my research, I could identify a group whose interests are to maintain a specific mode of economic production, namely extractivism, which is represented in CORPROA. This group has significant influence on the media, political authorities and the process of policy making. As such, their representations of environmental protection, economic development, and I would assume collective health, are the dominant worldviews within the region and province. On the other hand, there is another group of people that directly bears the environmental consequences of extractivism, whether conscious of it or not, and which has little influence on governmental decisions. This latter group, I argue, can legitimise the existing social order, such as it is the case of local health councils in Huasco, or can develop alternative worldviews through an incessant process of cultural production and resistance, as seems to be the case with Brigada SOS Huasco.

Consistent with the findings that placed fear as a powerful emotional element underlying the depoliticised character of local health councils, as described in the previous section, the loss of fear among members of *Brigada SOS Huasco* was a central discoursive element during my research. In this regard, members of *Brigada SOS Huasco* and other grassroots organisations in

Valle del Huasco, frequently articulated this idea through questioning "the immaculate vision of a political authority" (social movement participant 13), or by claiming that "now, we can struggle with anyone, since we are not afraid anymore" (social movement focus group). Of particular importance to members of *Brigada SOS Huasco* were the events in Huasco and Freirina in 2012, when women, men, and children had to confront the police and private guards from the agroindustrial plant in Freirina. One of them manifested that: "after that battle, what else could we be afraid of?" (social movement focus group). For other members of *Brigada SOS Huasco*, the idea of the loss of fear corresponded to a more subtle psychological process related to people's ability to speak out. During my fieldwork, I could also observe how participants of this organisation confronted political authorities and the police, such as in the case of the protest against the Minister of Environment in April 2017. Therefore, moving away from structuralist positions, it is quite interesting to think that the loss of fear might be the emotional base for any social revolution.

Considering the differences between local health councils and Brigada SOS Huasco, I argue that members of this grassroots organisation are, in general, critical regarding formal spaces for participation and government institutions. As described in Chapter 6, this position is justified by many years of attempts to approach government authorities, and pursuing their demands through institutional channels, with poor results. It is also justified by what they consider a disproportionate influence of industrial representatives on political decisions, especially in Valle del Huasco. As such, one of the main findings of this research is the distance that exists between health workers, local health councils, and social movements in the district of Huasco. In particular, members of Brigada SOS Huasco felt anger and distrust towards local health workers, and even described them as "insensitive, like real mummies" (social movement participant 1). From a theoretical position, I argue that this distance relates to the different standpoints from where members of Brigada SOS Huasco and health workers assess the current socioeconomic and environmental situation in their territory. Again, using Žižek's (2009) notion of postpolitics, health workers would be situated at the non-violent zero level, and therefore their professional activity would correspond to a post-political practice. In this regard, participants of Brigada SOS Huasco denounced the role of health workers in legitimising economic dependency on provincial industries in Valle del Huasco. The distance between health workers and grassroots organisations in Huasco requires closer attention, considering the important role health workers should play regrading environmental pollution and health (Landrigan et al., 2018; Ramanathan & Haines, 2016).

Furthermore, I propose that it is this distance that justified in the first place the implementation of the Programme for Environmental and Social Recovery of Huasco (PRAS, in Spanish). As I mention in Chapter 7, the PRAS emerged in a context of gradual delegitimation of political authorities and the emergence of massive socioenvironmental mobilisations in Huasco, Quintero-Puchuncaví, and Coronel. It also coincided with the increasing concerns articulated by regional industrial representatives regarding the suspension of investment projects in the province. Thus, the PRAS intended to become a new space for participation and dialogue among civil society, industrial representatives, and government authorities in the district of Huasco. Despite proclaiming itself as an "unprecedented" space for participation (Ministerio del Medio Ambiente, 2017c, p. 8), from my research I conclude that the PRAS only constituted the most recent participatory space in a more extensive trajectory of government attempts to intervene in the territory. Having said that, the PRAS does correspond to the most persistent and systematic effort from government authorities for gathering representatives of multiple sectors in one space. According to my fieldwork, the PRAS had some characteristics similar to local health councils in Huasco, such as the non-binding character of its recommendations, the fragmentation of the discussions, and the utilisation of previously designed schemes for participation.

Since the objective of the PRAS is to show that "the harmonic coexistence of industrial activities, environmental protection, and good quality of life for the people is possible" (Ministerio del Medio Ambiente, 2017c, p. 17), it places the boundaries for the discussions within a post-political space. In other words, it removes from the start the possibility to conceive current industrial activity and institutions as illegitimate. More specifically, it does not allow the possibility of contradictions among these objectives. Despite this, the PRAS also has some differences with previous spaces. I propose that one main difference is the incorporation of members of Brigada SOS Huasco and their confrontation with other actors. In other words, it is the presence of a highly-politicised group in a depoliticised space. Or using Tapia's (2008) insights, it is the politicisation of a previously non-politicised and co-opted space. As a result, many actors developed both discursive and non-discursive strategies for struggle. Government officials attempted to impose their definitions of participation and democracy using an initial framework, a concept proposed by Bolados (2009). Similarly, they disregarded previous agreements, in what Bolados (2009) refers to as state amnesia. Government authorities permanently underestimated environmental pollution and health consequences. It is illuminating that once, I asked one of the persons in charge of the PRAS if this space was implemented in Huasco because there is pollution or because people think that there is

pollution. She answered: "we cannot speak about environmental pollution, so I think that in Huasco people manifest their perception that there is environmental pollution" (Ministry of Environment authority 3).

However, some civil society councillors in the PRAS, including supporters and members of *Brigada SOS Huasco*, deployed strategies and resources to delegitimise publicly representatives of government, including pressuring for the abandonment of the space, writing public declarations, and preparing expositions within this space for the rest of councillors. They also initiated processes of environmental and health education with the other participants. In this sense, the PRAS ended up constituting a highly politicised participatory space, where local communities attempt to regroup and articulate social demands, previously fragmented by the PRAS framework. A more medium-term assessment of the PRAS is pending, however, I propose that to my knowledge, the PRAS has allowed the dissemination of social movement demands, increased their support base, and provided legitimacy to it. It constitutes a "moment of visibility", using Melucci's term (1985), for *Brigada SOS Huasco*, and more broadly, for *Movimiento Socioambiental del Valle del Huasco*. On the other hand, it also resulted in community demobilisation during the period of its implementation, and the emergence of serious mistrust among its participants.

How does the socioeconomic context influence both spaces for institutional participation and social movements in the territory of Huasco?

So far, I have provided some preliminary elements that describe the relationship between socioeconomic conditions in the territory and the possibilities and constraints for collective participation in health in the district of Huasco. A first insight from this research relates to the accelerated transformations in the modes of economic and social production during the last 30 years in Huasco, and their effects on the working conditions of its inhabitants. These transformations correspond, as I discussed in Chapter 3, to a steady decline in traditional economic activities such as agriculture and fishing, and their replacement with mining and electricity generation industries. These latter constitute today the principal economic sectors in the territory, providing direct employment for around 20.8 per cent of its active population (Ministerio de Desarrollo Social, 2015). In this context, working conditions in Huasco are characterised by a high percentage of non-qualified workers with short-term and seasonal

contracts, a high proportion of outsourced workers, and high and variable unemployment rates (Instituto Nacional de Estadísticas, 2018; Ministerio de Desarrollo Social, 2015). These precarious working conditions, I argue, pose fundamental limits for both institutional spaces for participation in health, and grassroots organisations such as *Brigada SOS Huasco*.

In the case of institutional spaces for participation within health care centres, I maintain that these socioeconomic conditions affect their autonomy in at least two ways. Firstly, mining and electricity generation industries, including CAP Minería and *Guacolda* thermoelectric plant, provide substantial funding for health infrastructure and health programmes in the territory. For example, in 2011 CAP Minería contributed to a third of the total costs of construction and implementation of the new primary health care centre Juan Verdaguer ("Inauguran moderna infraestructura del consultorio Juan Verdaguer", 2011). Similarly, in 2014 *Nueva Unión* mining project inaugurated the provincial network for health promotion, providing economic and logistic resources for most health care centres in the province of Huasco ("Red provincial de promoción de salud lanza concurso fotográfico", 2014). Secondly, provincial industries also provide funding for local health councils in the primary health care centre Juan Verdaguer and the community hospital Manuel Magalhaes Medling, through competitive funds for community projects. I argue that these private funds condition, to a certain extent, the issues that can and cannot be addressed within these participatory spaces, and the absence of debate regarding environmental pollution among their members and health workers.

Moreover, the gradual replacement of state responsibilities to private corporations in Huasco may be associated with an increasing workload for health workers, preventing them from more meaningful involvement in both community work and environmental health problems. As such, most of health workers which I interviewed declared that they had to direct most of their efforts to those activities related to health-goals, which were associated with an economic incentive, as stipulated by Law 19,813 that provides benefits to primary health care (Ministerio de Salud, 2007a). Even though the creation of local health councils within health care centres in Huasco constitutes one of these health-goals, health workers usually restricted community participation activities to the minimum requirements established by regional health authorities. Also, only few workers were involved in these formal participatory spaces during my research. In this regard, one of them affirmed that "if participation were not a health-related goal, no one would care about it" (Health worker 4). Consequently, I suggest that both the increasing economic dependency of public health services on provincial industries and the gradual

reduction of state responsibilities, may contribute to the instrumentalisation of local health councils, and the subsequent legitimation of industrial activities in the territory.

For members of Brigada SOS Huasco, the socioeconomic structure of the territory also posits significant constraints for their cultural and political strategies. The economic dependency of most families on local industries implies that there is a generalised rejection of any discourse or activity that might endanger their job security in their territory. This is the position, for example, of the majority of members of local health councils in Huasco, as discussed in Chapter 5. Despite the gradual legitimation of Brigada SOS Huasco among the rest of the population in recent years, the determinant role of the industries in the region seems to contribute to a stagnation in membership within the city. The latter has motivated most members of Brigada SOS Huasco to redirect and expand their strategies beyond the district of Huasco. For example, during my fieldwork, many of their activities were aimed at supporting other grassroots organisations in the province, including Asamblea de Freirina, and Asamblea por el Agua de Guasco Alto, as mentioned in Chapter 6. In addition, the importance of the mining and electricity generation industries in their territory led a reduced group of supporters of Brigada SOS Huasco to propose to gradually approach industrial workers and their families. However, due to previous failed attempts, this approach remained as a marginal position within the organisation and the broader Movimiento Socioambiental del Valle del Huasco.

From a theoretical perspective, the aforementioned problems seem to reveal that the construction, reconstruction, and resistance of cultural values and norms by *Brigada SOS Huasco* are intimately linked to its material, symbolic, and relational contexts, as Della Porta (2015) and Barker (2013) suggest. In particular, the cultural production and political resistance of *Brigada SOS Huasco* relates to what Svampa (2012) refers to as neo-extractivism. As described in Chapter 2, neo-extractivism denotes a specific neoliberal mode of economic production and social reproduction in Latin America characterised by the large-scale and capital-intensive exploitation of natural resources by transnational industries, and the consequent precarization of labour force and environmental devastation (Svampa, 2012). For Harvey (2004), neo-extractivism also corresponds to a manifestation of what he refers to as capital accumulation by dispossession, as the gradual commodification of human life and the natural environment. Therefore, I argue that the cultural struggle of *Brigada SOS Huasco*, which is unfolded in terms of environmental protection and collective health, seems to correspond, as Baker (2013) and Žižek (2012) argue, to a displacement of an underlying economic and political conflict i.e., a

conflict due to the contradictions that arise from the way specific societies produce and reproduce their material subsistence (De la Garza, 2012; Sánchez, 2003).

In line with the preceding, a recurrent idea throughout this research is what I consider the gradual commodification of institutional spaces for participation, as the ongoing extension of private markets' relations into participatory programmes within the health sector in Huasco. A first observation that sustains this idea corresponds to the generalised use of predefined and relatively rigid participatory schemes and regulations, both within local health councils and the PRAS. I argue that the conceptualisation of participation as a standardised intervention promotes its incorporation into the market as a commodity, with a specific exchange-value, that can be sold and bought. A second interrelated observation is the increasing specialisation of participation, manifested in the gradual development of associated academic programmes, and more recently, the establishment of external technical agencies specialised in the implementation of participatory interventions, as is the case of the PRAS. I also include in this observation the increasing professionalisation of a small number of community members that seemed to capture most formal participatory spaces in the territory. These participants are experienced in legal regulations, institutional procedures, and applying for external funding. A third element that sustains the idea of a gradual commodification of participation corresponds to the generalised funding of participatory programmes and community projects through competitive schemes, often provided by the private sector, as I have discussed in detail above.

What is the contribution of social movements theories to the field of community participation in health, and public health in general?

In Chapter 1, I argued about the recent turn among some scholars in the field of community participation in health towards the study of social movements, considering the potential of contemporary social movements for tackling health inequalities and deepening democracy (Campbell et al., 2010; Fassin, 2008). I then suggested that addressing social movements from the field of collective participation in health, and public health in general, required a closer look. One of the problems for the incorporation of social movements to the study of participation and public health relates to the existence of multiple theories of social movements. Most of these theories coincide in emphasizing the cultural aspect of contemporary social movements, and the centrality of conflict within modern societies (Touraine, 1985). Some of

them also integrate the study of social movements within a broader framework of political opportunities (McAdam et al., 1996), and socioeconomic conditions that define the content of demands and the social basis for protest (Della Porta, 2015). In Latin America, scholars on social movements propose to understand the cultural struggle of social movements, essentially, as a political struggle (Álvarez et al., 1998), and suggest the notion of politicization to comprehend social movements as the overflow of traditional politics (Tapia, 2008). Within Marxism, social movements are considered as mediated expressions of class struggle (Barker, 2013).

As such, the incorporation of social movements to the study of collective participation in health, and public health in general, requires considering the diverging ideological and theoretical assumptions of each approach, in particular, the conflicting understanding of culture, and its relationship with the political and economic spheres. For example, scholars within the new social movement theory propose to look at the cultural dimension of social movements as increasingly detached from economic and political structures (Melucci, 1985; Touraine, 1985). Researchers on the comparative perspectives of social movements suggest that culture, political opportunities, and resources mobilisation, are three distinct dimensions of collective action (McAdam et al., 1996; McAdam et al., 2007). As mentioned before, for many Latin American scholars, the cultural dimension of a social movement is also political (Álvarez et al., 1998; Tapia, 2008). Within Marxism, class struggle is economic, political and cultural simultaneously (Barker, 2013; Cox & Gunvald, 2014). Having said that, in the next paragraphs I will refer to two main contributions of the theories of social movements that I have not addressed directly above, but which are essential for the development of this research: the importance of conflict in contemporary societies, and the emphasis placed on human agency and social change.

A first contribution of social movement theories to the field of community participation in health, and public health in general, corresponds to the understanding of conflict as an essential aspect of contemporary societies. It implies to look at disruptive and non-conventional action, such as protests, uprisings, and strikes, as well as those latent and submerged everyday cultural practices, as the fundamental mechanisms through which people create, recreate, and transform societies (Barker, 2013; Tarrow, 2011). In particular, the idea of conflict within the theories of social movements relates to the recognition of different social groups with contradictory interests (Della Porta & Diani, 2006; Touraine, 1985). In this regard, Tarrow (2011) suggests that disruptive action is often used by people that do not have access to political institutions, or by people that challenge and resist predominant cultural values and norms. Within the field of collective participation in health these interrelated ideas would require reconsidering many

disruptive mobilisations and protests, not as deviations, but as part of a broader repertoire of strategies that disadvantaged communities have employed historically to protect their health (Brown et al., 2011; Molina, 2010). For example, I argue that many of the disruptive activities that *Brigada SOS Huasco* coordinated in the territory, such as the protest against the Minister of Environment in April 2017, were essentially collective actions aimed to defend their health and their life, consistent with the definition of health promotion.

A second contribution of social movement theories to the field of community participation in health is their common emphasis on human agency and social transformation, which refer to the capacity of human beings to continuously create and recreate culture. Additionally, from the theories that suggest that cultural practice is eminently a political one (Alvarez et al., 1998), or that political and economic conflict are often inscribed in a cultural struggle (Barker, 2013; Cox & Gunvald, 2014), it follows that human agency is not restricted to the creation, recreation, and resistance of cultural norms and values in a society, but also implies the potential for broader structural change (Della Porta, 2015; Gunvald & Cox, 2013). In particular, from a Marxist perspective on social movements, it implies to look at social movements not in a void, but as mediated cultural expressions of broader underlying economic and political conflict (Cox & Gunvald, 2014; Žižek, 2012). Regarding the field of community participation, Samaja (2004) argues that predominant cultural representations of health, disease, and health care correspond to the sediment and contingent struggle of antagonist social groups. As such, participation in health, which corresponds to the creation, recreation, and resistance of representations of health seem to correspond to a displaced economic and political conflict. In this regard, I suggest that Brigada SOS Huasco's demands for the protection of their collective health and their environment, are expressing, as a displacement, an underlying economic and political conflict among industrial representatives and local communities in the territory.

From a Marxist approach to social movements, I propose a third main contribution to the field of community participation, and public health in general, which is to consider health promotion as an essentially political and subversive practice. As it has been defined in Chapter I, health promotion refers to "the process of enabling people to increase control over, and to improve, their health" (World Health Organization, 1986). From this definition, I argue that health promotion implies a process of politicisation, i.e., to make public and collective what once was perceived as an individual problem, and to understand shared health problems as deeply rooted in unequal socioeconomic conditions (Brown et al., 2011; Tapia, 2008). According to Žižek (2009), these unequal socioeconomic conditions, which are expressed in

unequal epidemiological conditions, reflect the objective violence that is inherent in what we perceive as the normal functioning of capitalist societies, and, because of its proximity, usually remains invisible. Consequently, it is necessary to denounce and transform, hence subverting, these unjust and illegitimate socioeconomic contexts for improving people's health. Here, I finally maintain that this is the case of *Brigada SOS Huasco* in Northern Chile.

Conclusions

Although this research is not the first one to address spaces for community health participation in Chile, to the best of my knowledge, it is one of the first to do so after 2011 in the period Garcés (2012) refers to as the "awakening of society", i.e. the delegitimation of traditional politics and government institutions. Also, it would correspond to one of the first investigations after a series of legal regulations on community participation in health. These include the Ministry of Health Law 19,813 of 2008, that provides benefits to primary health care; Law 20,500 of 2011, about citizen participation in public administration; and the Ministry of Health Exempt Resolution 31 of 2015, that approved the general regulation of citizen participation in the public health sector. Additionally, and after Bolados' ethnographic research in San Pedro de Atacama in 2009, it would be the second study that examines community participation in health outside Santiago de Chile, focusing on the district of Huasco, in Northern Chile.

According to this research, findings on local health councils in the district of Huasco, which are the most important mechanisms of citizen participation within health care centres, do not differ from previous research findings on spaces for community participation during the period of transition to, and consolidation of democratic capitalism. In this regard, local health councils can be characterised as eminently consultative and non-binding mechanisms for citizen participation, mainly instrumental spaces which are frequently subordinated to the requirements of local health workers and health authorities. Local health councils in Huasco also correspond to depoliticised spaces, revealing the fragmentation and isolation of health demands, and the avoidance of any type of conflict with health workers. Participants of these spaces recognise themselves as "impartial and non-political", and disregard any type of disruptive mobilisation for attaining their purposes.

Local health councils in Huasco contribute to the formulation of annual participatory health appraisals, and to improve communication between health workers and patients, especially the elderly. Similarly, local health councils apply for external funding for infrastructure projects, and for the acquisition of clinical supplies. Often, these funds come from provincial industries largely responsible for environmental pollution in the territory, such as CAP Minería and *Guacolda* thermoelectric plant. In this regard, local health councils and health care centres in the district of Huasco seem to have established relations of economic dependency on provincial industries. Albeit it was not possible to estimate the magnitude of economic contributions from

industries, there is evidence that it is significant. From my research, I argue that the gradual replacement of state responsibilities to private corporations affects the autonomy of both local health councils and health care centres for addressing collective health problems such as environmental pollution.

One of the main grassroots organisations in the district of Huasco is *Brigada SOS Huasco*, an informal organisation created in 2010. Its main objective is the protection of collective health and the environment. *Brigada SOS Huasco* is part of the broader *Movimiento Socioambiental del Valle del Huasco*, which groups other socioenvironmental organisations in the territory such as *Asamblea de Freirina* and *Asamblea por el Agua de Guasco Alto*. Specifically, members and supporters of *Brigada SOS Huasco* disseminate information regarding environmental health among local communities, and denounce government authorities for what they consider the government's responsibility for the environmental situation in Huasco. They organise community workshops, protests, cultural activities, mural painting, and radio programmes, among many others.

There is distance between members of *Brigada SOS Huasco*, health workers and members of local health councils in the territory. On the one hand, health workers and participants in local health councils criticise *Brigada SOS Huasco* for their informal organisation, for their directaction and disruptive strategies, and for the economic consequences their protests could bring to the rest of the inhabitants of Huasco. On the other hand, members and supporters of *Brigada SOS Huasco* criticise health workers for their passivity regarding environmental health, and described them as "insensitive, like real mummies". Members of *Brigada SOS Huasco* also denounce the economic dependency of health centres on pollutant industries, as described above.

Due to the gradual delegitimation of political authorities in Huasco, the emergence of social movements, and the concerns of regional industrial representatives regarding the suspension of several investment projects, in 2015, government authorities implemented the Programme for Environmental and Social Recovery of Huasco (PRAS). The PRAS is a consultative and non-binding space for participation, including 24 councillors as representatives from civil society, industrial sector, and government. Albeit it is described as an "unprecedented" space for participation, according to my research it seems to correspond to the latest government attempt to intervene in the territory with a predefined participatory scheme.

Within the PRAS, both government representatives and civil society councillors that are also members of *Brigada SOS Huasco*, deploy different discoursive and non-discoursive strategies for managing the space. Within government authorities, the most common strategies were the imposition of the definitions of participation and democracy, the underestimation of environmental health problems in the territory, and the non-fulfilment of previous agreements. On the other hand, some civil society councillors wrote public declarations, threatened collective withdrawal from the space, and openly questioned the legitimacy of political authorities. The participation of some members of *Brigada SOS Huasco* in the PRAS, allowed the dissemination of information regarding environmental health to external groups, and the legitimisation of their position in front of civil society. However, some members' participation also resulted in tensions with the rest of the organisation, due to their lack of trust of these participatory spaces.

From a theoretical perspective, the incorporation of social movement theories into the study of community participation in health, and public health in general, provides new insights related to the centrality of conflict and human agency in contemporary societies, as well as the idea of politicisation of collective action and the emphasis placed on cultural conflict. Additionally, I argue that a Marxist methodology for research on participation in health and social movements is appropriate. It provides the notion of economic and political conflicts as inscribed in cultural conflict, and the consequent idea of social movements as mediated expressions of class struggle. Marxist methodology also implies the acknowledgment of different levels of abstraction and concreteness for social research, the methodological capture of movement, the reconstruction of the totality, and the understanding of the research process as a political praxis as expanded in Chapter 4.

This research can contribute to a better understanding of the current role of health workers in contexts of environmental pollution, and the possibilities of local communities to resist and transform unequal epidemiological and environmental conditions in their territories. In Chile and in Latin America, there is increasing destruction of territories due to extractivist activities, and there is growing conflict between government authorities, health workers, and social movements for the protection of collective health and the environment. This research in collective participation in health in a context of environmental conflict, can provide some answers, or at least, posit some new questions to health workers and local communities in Valle del Huasco. Other regions also affected by unjust and illegitimate socioeconomic conditions that affect their collective health can also make use of this study.

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