'Silver rain': industrial pollution, environmental conflict and emotion in Rio de Janeiro

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Declaration

I, Delia Rizpah Hollowell, 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.

Abstract

This thesis examines the impacts of one of the largest steel mills in Latin America. ThyssenKrupp's Companhia Siderúrgica do Atlântico (TKCSA) opened in Santa Cruz, Western Rio de Janeiro, in 2010 and was sold to Ternium in 2017. The company's time in the area was marked by controversy and conflict surrounding claims that it had destroyed 'natural' habitats, displaced families, caused aquatic and ambient air pollution, negatively impacted local peoples' health, and compromised livelihoods based on small-scale fishing. I conducted fifteen months of ethnographic fieldwork around the factory, living two streets away from its boundaries and participating in a local group campaigning against the TKCSA (dubbed '*Pare TKCSA*', or 'stop TKCSA'). I also undertook participant observation in a local State-run health centre in the residential area neighbouring the steel mill.

This thesis explores subject matter as distinct as trafficking and the militia, sex and relationships, corporate language and protest, and religious beliefs and friendship. However, these themes do not, in themselves, constitute the core elements of its main arguments. Instead, I have focused on emotions as they emerged in the interstices of each of these disparate topics. A growing body of recent research investigates the place of emotion as part of toxic exposure experience and environmental conflict. My findings contribute to these explorations by making use of a broad and inclusive analysis of emotion, reading feelings within the fabric of everyday life, keeping an open mind in relation to the causation of emotions, embracing the dynamism of constantly shifting emotions, and viewing affect as a productive social force. I argue that emotions must be investigated, not merely as intertwined elements of the health impacts of ambient air pollution and environmental conflict, but also as crucial forces in the very ways that environmental conflict and a polluted lived world unfold.

Impact statement

My work adds to the body of evidence regarding the TKCSA (now Ternium) and its impacts. It highlights the pervasiveness of emotional impacts that have emerged as part of the contamination and conflict generated through the presence of the steel mill in Santa Cruz.

This thesis contributes to the anthropology of emotion in the context of environmental conflict and contamination. It amalgamates various approaches that have, so far, rarely been brought together. My work brings together medical anthropology approaches, the anthropological study of emotion and themes explored in the anthropology of toxicity, mining, and extraction, 'Corporate Social Responsibility' and the Anthropocene. In doing so this project is a reminder of the value of collapsing sub-categories of study in order to more accurately represent experiences of the ways that environment and emotion may shape each other.

This dissertation also illustrates the value of taking an ethnographic approach to studying the feelings associated with environmental disputes, pollution, and disaster. It provides an example of the kind of breadth and detail that can be uncovered when we slow down to appreciate multifaceted everyday experiences. It is well documented that emotional processes form an integral part of health and wellbeing. Therefore, the feelings associated with large scale industrial or infrastructure projects, pollution, environmental degradation, and conflict, must be taken seriously. This should be taken into account when consulting with those potentially affected by such projects, when undertaking impact assessments and in all licensing processes. My work shows that ethnographic approaches are well placed to elucidate the emotional experiences of environmental conflict.

Similarly, this work has wider relevance for the direction of public health approaches towards mental health and environmental degradation, including climate change. While one might suggest that the best treatment for environmentally induced psychological distress is arguably prevention, the need to effectively address the emotional impacts of environmental change, disasters and

specific climate change risks is already becoming more pressing. My work suggests that any scale-up of psychological interventions associated with the climate emergency that is undertaken, would benefit from the kinds of understandings of the pervasiveness, ambivalence, and productivity of emotion, that can be generated through ethnographic investigation.

Dissemination

I have disseminated some of the findings of this PhD project in a variety of contexts. My work has had some impact outside academia, through my engagement with several organisations in Brazil and Germany. I provided a report on local understandings of the impacts of pollution on health and wellbeing in Santa Cruz, to lawyers working with local people on their legal claims for compensation from the ThyssenKrupp Companhia Siderúrgica do Atlântico. I have also attended, and spoken at, a number of public meetings in Rio de Janeiro. Examples of these are:

- A meeting with the United Nations Working Group on Business and Human Rights and 'civil society representatives' in the UN Working Group's visit to Brazil.
- A meeting with representatives from the Brazilian Bar Association.
- A seminary in Rio de Janeiro's Municipal Chamber about the water crisis in late 2015.

I linked up with the German Umbrella Association of Critical Shareholders, to present at the ThyssenKrupp AG Annual General Meeting in Bochum, Germany, in 2016 and 2017. Both of these speeches were later made available online.

I have also disseminated my work within academia. Since 2014 I have participated in, and presented at, four UCL-based anthropology conferences. Other academic conferences I have presented at, are:

- Dimensions of Political Ecology conference at the University of Kentucky in 2016.
- Resource Entanglements: Disparate Narratives on Natural Resource Extraction in Latin America at the Institute of Latin American Studies in 2016.
- Critical Medical Anthropology: Perspectives from / of Latin America Workshop organised by UCL Institute for Global Health and UCL Anthropology, in 2017.

- The EASA Medical Anthropology Network's Biennial Conference Network Meeting, 'Bodies in Transition – Power, Knowledge and Medical Anthropology', at the University of Lisbon, in 2017.

I have written an article for a special theme issue on Extraction, Action and Engaged Anthropology, in the journal 'Practicing Anthropology', published in 2016. I wrote an article entitled, "Political involvement during fieldwork: notes on not doing 'applied', 'engaged' or 'public' anthropology" for Medical Anthropology at UCL, in 2017. I have also published an article in the journal 'Medicine Anthropology Theory', in 2023, called "'Just graphite': corporate representations of particulate matter in Santa Cruz, Rio de Janeiro".

Research paper declaration

The following journal articles have been published, based on work originating from this thesis.

1. Title: Political involvement during fieldwork: notes on not doing 'applied', 'engaged' or 'public' anthropology

    Author: Delia Rizpah Hollowell

    URL: https://medanthucl.com/2017/05/12/featured-content-2/

    Published in 'Medical Anthropology at UCL'

    Date: 2017

    Not peer reviewed

    Copyright retained

    This material can be found in Chapter 2

2. Title: 'Just graphite': corporate representations of particulate matter in Santa Cruz, Rio de Janeiro

    Author: Delia Rizpah Hollowell

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    Published in 'Medicine Anthropology Theory'

    Date: 2023

    Peer reviewed

    Copyright retained

    This material can be found in Chapters 8, 10, and 12.

Delia Rizpah Hollowell

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I owe a special thanks to Mônica Cristina Brandão dos Santos Lima, from the Faculty of Medical Sciences of Rio de Janeiro State University (UERJ), for all her support, insight and encouragement.

I am very grateful for the contributions made by the team at the health centre in which I worked. My walks with Community Health Agents as well as the group interviews with doctors, nurses, pharmacists and managers, were invaluable. I must also thank the many local people who allowed me to enter their homes and to talk with them, during Community Health Agent visits.

I would also like to thank members of the Oswaldo Cruz Foundation who spared the time for me to interview them.

My PhD supervisors, Sahra Gibbon and Audrey Prost, deserve unending thanks for their patience, guidance, and support throughout my PhD. I am grateful for their help identifying, and support in taking up, opportunities for the dissemination of my work. I don't think any of us had imagined how long this project would take to complete and I very much appreciate all the work they put into my PhD project as well as their ongoing support and belief in me.

Thanks, too, go to fellow PhD students who attended thesis writing seminars, and who read and commented on some chapters of this thesis.

I am grateful to my family for all their love, patience, and encouragement. Thanks, Mum, for all the practical support you have so tirelessly provided so I could make use of nursery time to write. Thank you, Greg for encouraging and supporting me throughout this process, and for all our fruitful conversations about it.

To my little ones, you were all born during the time I was writing this thesis. Thank you for being who you are, and for making me who I am too.

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Chapter 1. Introduction

Introduction

This thesis is about how people understand and experience industrial pollution and environmental conflict. I have conducted an ethnographic study in Santa Cruz, Rio de Janeiro, Brazil, where people were directly affected by poor air quality and environmental degradation which they associated with a particular industrial project. My aim has been to understand the impacts of this, as well as the conflict that has arisen around one of the largest steel factories in Latin America; ThyssenKrupp's Companhia Siderúrgica do Atlântico (the TKCSA or the CSA), now run by Ternium. I have explored how the conflict has unfolded, how it has interacted with other aspects of life in the area, its effects, and how it felt for people living around it.

Scholars have called for further investigation of how it 'feels' to experience environmental conflict and toxic exposure (Little, 2012; Sultana, 2015). I have explored this with a focus on the emotional impacts of environmental conflict. Each chapter, however, considers different elements of life in the area, each associated, or interacting, in its own way, with the impacts of the steel mill. The chapters of this thesis take on subjects as diverse as, drug trafficking and the militia, intimate and sexual relationships, 'corporate social responsibility', protest and institutional support for anti-TKCSA campaigners. However, through these topics a picture has emerged of emotional experiences of memory, insecurity, jealousy, trust and mistrust, fear, blame, solidarity, self-actualisation, frustration and resignation, friendship and working relationships. The dispute surrounding the TKCSA was not restricted to the engagement between the company and the people living around it. Rather, it expanded into the interactions, relationships and emotional states that occurred around the steel mill. It is these emotional aspects of environmental conflict that I wish to explore in this thesis.

While the issue of the emotional impacts of environmental degradation has gained considerable traction over the last decade, I have followed the emotion that emerged as part of the experience of environmental contamination and conflict in Santa Cruz, in its widest sense. I employed an ethnographic approach and lived two streets away from the factory. I reflexively took part in local activities, maintained curiosity while listening and observing, developed and worked on relationships and recorded what emerged. This allowed me to observe and understand many of the feelings that materialised as part of responses to living next to the TKCSA. I followed emotions as they arose in the interstices of everyday life, with a broad perspective on their causation, examining the transformations created by emotions as active elements of environmental conflict and following the impacts of those transformations. Fieldwork in Santa Cruz has led me to an understanding of emotion as an integral and unbounded part of living with a large-scale industrial project, industrial pollution and a powerful corporation. I argue that it is only through maintaining this broad view, and by paying attention to how emotion develops through many different aspects of life, that the diverse dynamics of affective experience of pollution, and socio-environmental conflict can be understood. This introductory chapter will go on to unpack the details of the conflict I explore, some of the literature that has paved the way for this type of investigation and an outline of the structure of this dissertation.

ThyssenKrupp Companhia Siderúrgica do Atlântico

This study is based on the case of a factory producing and processing steel that was installed at the western edge of Santa Cruz, itself located at the western edge of Rio de Janeiro. Work began on the steel mill in 2006 and it began operating in 2010. ThyssenKrupp operated the steel mill (*ThyssenKrupp Companhia Siderúrgica do Atlântico*, also known as the TKCSA, or the CSA) until it was sold in 2017 to Ternium[1]. Controversy and conflict surrounded this industrial project from very early in its development. Issues have included conflict over the eviction of local families previously living on the land used for the factory (EPSJV Fiocruz, 2011), the destruction of habitats including areas of mangrove forest (Instituto

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[1] As of 2023, the steel mill continues to operate as Ternium Brasil.

PACS, 2016a), the disturbance of fish populations, water pollution and the impact on small-scale fishing in the area (Zborowski and Loureiro, 2008; Instituto PACS, 2021b), ambient air pollution (Defensoria Pública RJ, 2020), the repeated flooding of neighbouring residential areas (Pinto, 2016), damage to housing near the factory (Instituto PACS, 2017), irregularities in the licensing process (Instituto PACS and Justiça Global, 2017), the legality of tax incentives given to ThyssenKrupp by state and federal authorities (Reuters, 2016), the involvement of militia members threatening campaigners against the factory (Porto et al., 2011) and ThyssenKrupp's own legal actions against academic researchers for 'moral damages' (Instituto PACS and Justiça Global, 2017).

However, contention has centered on the company's emissions of particulate matter, which local people have dubbed 'silver rain' or 'metal rain'[2]. Critical polluting events occurred in 2010, when substantial showers of metal dust fell on the TKCSA's neighbours, settling in thick layers over the area (Porto et al., 2011; Gaier, 2012). Many people living around the factory have claimed, and as of 2023 continue to claim, that a fine metallic dust still falls on residential areas near the steel mill. Many residents of Santa Cruz have expressed concerns about their exposure to ambient air pollution and its potential impact on their health. They have described suffering allergic reactions, nosebleeds, headaches, joint pain, shortness of breath, sore eyes, rashes, runny noses, and blocked sinuses. Some who live near the steel mill have claimed that the TKCSA's operations brought about an increase in the number of people with cancer in the area and that factory neighbours were falling more gravely ill, more frequently, since the TKCSA was established.

There has been much disagreement about almost every aspect of this conflict. All parties involved have made claims about whether the metal dust exists at all, what it contains, how much of it there is, and whether pollution-related health impacts have occurred amongst the residents living near the factory. Multiple contending languages have been used to contest the meanings and practices surrounding the

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[2] This is a translation of 'chuva de prata'.

air pollution and associated health impacts. In this sense, both the presence of air pollution and associated environmental health concerns have been constituted as unstable objects of knowledge and management. In this context, attempts to alter the status quo have been made by all those involved with the conflict. ThyssenKrupp claimed the falling dust was temporary, solely made up of graphite and presented no risk to health (ThyssenKrupp AG, 2010). However, residents, gathering under a 'Stop TKCSA' banner[3] campaigned against the factory since the conflict surrounding it began in 2006, and they tell a different story. During the time I was in Santa Cruz, campaigners complained that the company pollutes their neighbourhoods and that, as a result, their health was deteriorating or had deteriorated. While the campaign began with well attended protests, the 'Stop TKCSA' group was, at the time of my fieldwork, made up of a core of about ten to fifteen members.

Their campaign has been supported and documented by NGOs, most notably the *Instituto Políticas Alternativas para o Cone Sul (or the Instituto PACS)*, and academics throughout Rio de Janeiro's major research institutions and universities (the Oswaldo Cruz Foundation, Rio de Janeiro State University, the Federal University of Rio de Janeiro, the Federal Rural University of Rio de Janeiro) as well as organisations based outside of Brazil, such as the Rosa Luxemburg Foundation and the Association of Ethical Shareholders, amongst others. The TKCSA operated without an Operating License until 2016 (Rocha, 2018), it received multiple fines from the Brazilian authorities, running into tens of millions of Reais (Kato and Quintela, 2012; Mendes *et al.*, 2017) and hundreds of individual and collective legal cases have been brought against the TKCSA, some of which remained unresolved when Ternium bought the steel mill in 2017 (Instituto PACS, 2021a). For all parties involved, the stakes are high. I have conducted fieldwork and written this thesis to better understand some of the experiences of this conflict and understandings surrounding these controversies.

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[3] This organisation was later renamed 'Stop Ternium' (*Pare Ternium).*

Emotion, pollution, and environmental conflict

Literature dealing with emotion and affect in relation to environmental change has burgeoned since early environmental sociology, influenced by the environmental justice movement, began to highlight the psychological impacts of toxic exposure (Levine, 1982; Brown and Mikkelsen, 1997; Bullard, 2000). Bullard's seminal text 'Dumping in Dixie', for example, noted some of the psychological impacts associated with the location of toxic waste facilities and landfills near black communities in the Southern United States (2000). The examination of psychological impacts associated with environmental degradation continued in the field of disaster studies. Some of these studies have identified 'themes' of disasters, such as those forming part of Navajo exposure to uranium disaster (bereavement, environmental loss, and fear of future impacts, for example) which can contribute towards their psychological repercussions (Markstrom and Charley, 2003) and argued that resultant psychological disorders are best understood within the cultural values and practices of those affected (Markstrom and Charley, 2003; Edelstein, 2004). Some anthropological investigations of environmental conflict have emphasised the ways that negative emotional impacts of toxic exposure are inherently intertwined with community understandings, institutional interactions, health impacts and the outlook for potential change (Auyero and Swistun, 2009; Singer, 2011). This work has demonstrated the importance of understanding how emotions are embedded in the social life and material realities surrounding experiences of contamination.

The environmental philosopher Glenn Albrecht put forward a new term for place-based, chronic and negative emotion related to environmental change (2005). The term 'solastalgia' brings together the concepts of 'solace', 'desolation' and 'nostalgia' to capture the "pain or sickness caused by the loss or lack of solace and the sense of isolation connected to the present state of one's home and territory… It is the pain experienced when there is recognition that the place where one resides and that one loves is under immediate assault (physical desolation). It is manifest in an attack on one's sense of place, in the erosion of the sense of belonging (identity) to a particular place and a feeling of distress (psychological

desolation) about its transformation" (Albrecht, 2005, p.48). This term has gone on to be widely adopted to discuss cases of war, land clearing, mining, climate change and over-tourism (Lalicic, 2019; Albrecht, 2020; Glaway et al., 2019). Albrecht's work has emphasised the depth and importance of emotional reactions to environmental change.

Scholars working within the field of political ecology (Sultana, 2015; González-Hidalgo and Zografos, 2017; González-Hidalgo, 2021), as part of the 'emotional turn' in geography (Thien, 2011; Bondi et al., 2005) have developed a nuanced approach to emotion in situations of environmental conflict and contamination. This work has sought to comprehend the roles that emotions can play in everyday resource management practices and environmental conflict. The focus here shifted towards what emotions can 'do' relationally and the ways they can play a part in political subjectivation (Sultana, 2015; González-Hidalgo and Zografos, 2017, 2020; González-Hidalgo, 2021). González-Hidalgo's (2021) work, for example, identified three roles that emotions can play in the everyday defence of common land. Affective labour undertaken during the defence of common land can help cope with disruptive feelings in the context of environmental disputes. The emotional oppression involved in environmental conflicts can be reproduced within households and communities. Finally emotions can push local people to participate in top-down capitalist projects (González-Hidalgo, 2021). Emotional political ecology literature such as this, acknowledges the potential for emotional ambivalence and change as well as for the convergence of multitudinous emotions in environmental conflict, and explores how this can feed back into the development of environmental disputes.

This outlook is evident in other literature that emphasises emotion as an active social force in disaster and environmental conflict. Rebecca Solnit illustrated the potential ambivalence and utility of emotions in her exploration of how disasters may beget new forms of community and solidarity (2020). Siqueira and Víctora examined the ways that changing collective, emotional responses can drive political action after a disaster (Siqueira and Víctora, 2017). Manuel Tironi has

looked at forms of affective activism, allowing for endurance in the face of toxic exposure, as part of an expanded understanding of politics (Tironi, 2017, 2018). These approaches to emotion in environmental disaster, toxic exposure and socio-environmental conflict avoid prefigurative understandings to give us a detailed picture of the complexities and transformations of emotion as crucial to politics and as part of the materialisation of lived worlds.

The academic explorations I have discussed so far have shaped my work, illustrating the importance of the ways that feelings are embedded in socio-environmental conflict, incorporating understandings of potential ambivalence and transformations of emotion, and seeking the effects of emotion on socio-environmental disputes. However, some other coverage of the affective aspects of environmental conflict lacks some of the nuance and complexity which characterises broader social scientific examinations of affect / emotion. Some of the literature focusing on Anthropocene emotions, for example, has, so far, tended to document emotional impacts of environmental change as straightforward *reactions to* potential or experienced environmental loss (see for example, Cunsolo and Ellis, 2018; Albrecht et al., 2007; Clark, 2020; Clissold, McNamara and Westoby, 2022). These studies have highlighted the importance of affective aspects of Anthropocene transformations. However, they often name the emotional response to environmental change, and stop there; claiming, for example, that such and such a change causes 'distress' or 'sadness'. They provide a view of emotion as *effects of* environmental change, sometimes neglecting the possible complexity of emotions and the part that feelings can play in shaping the world around them, including the trajectories of environmental conflict. Considering the commitment, evident in most Anthropocene writing, towards defying boundaries, insisting on the juxtaposition of systems and embracing enmeshment (Tsing, 2019; Haraway *et al.*, 2016), this treatment of emotion is perhaps left wanting.

My fieldwork, and later writing, have led me to delve into feminist and queer theorists' explorations of emotion. It is this work that has, I believe, most attentively detailed the intricacies, ambiguities, and messiness of emotion. Following authors

such as Sara Ahmed (2014a), Sianne Ngai (2004), Ann Cvetkovich (2007), Lauren Berlant (2000, 2006, 2015), and Kathleen Stewart (2007) amongst others, I have maintained a focus on the everydayness of feelings, explored their public emergence and collective constitution, and attempted to remain conscious of the multifaceted and ambivalent nature of emotions. I have understood emotions as inextricable from the world in which they emerge, and as productive components in the creation of lived worlds. I have followed feelings as they surfaced in unexpected ways, finding the expression of emotion in attitudes and actions that may initially appear unrelated, and I have made efforts to remain mindful of my own situatedness when interpreting emotion.

With a number of notable exceptions (Sultana, 2015; González-Hidalgo and Zografos, 2017; Siqueira and Víctora, 2017; Tironi, 2017, 2018; Zhouri *et al.*, 2017; González-Hidalgo, 2021), it is this attention to the complexities and subtleties of affect as an active social force, as part of, as Rebecca Solnit has termed it, a rich tangle of unsorted experience (2020, p. 2), that has been omitted from, or not been fully explored in, some studies of socio-environmental conflict and degradation. Many studies of the emotional and psychological impacts of environmental change and disaster have investigated emotions as primarily individual affective *responses*, with little attention to the potential for feelings to feed back into understandings, relationships, conflict, protest, violence, corporate actions, and institutional policies, amongst other things. It is by drawing on the lessons learned from feminist and queer theorists and incorporating them into an anthropological investigation of toxic exposure experience and environmental conflict, that this thesis contributes to the study of the emotions of environmental change.

Brazilian research on the specifics of the case of the TKCSA has not, to date, included a great deal of attention to emotion, beyond some clinical diagnoses of reaction to severe stress, and adjustment disorders, in residents living near the factory (Porto et al., 2011). The studies of the case of the TKCSA have provided invaluable analysis of the ways in which the conflict developed and have effectively highlighted the complaints of campaigners against the factory (Zborowski and

Loureiro, 2008; Porto et al., 2011; dos Santos, 2012; Dias et al., 2014; Viégas and Mendes, 2017; Rocha, 2018; da Silva, 2019; Tavares, 2019; de Carvalho, Rocha and Finamore, 2021). However, none of these studies are based on ethnographic work that involved living beside the TKCSA, together with people directly affected by it. Perhaps, as a result of the methodologies used, none of these studies deal in-depth with the ways that the impacts of the factory are intertwined with other, everyday elements of life around the steel mill. It is in this sense that my work can contribute to understandings of the case of the TKCSA in Santa Cruz, Rio de Janeiro.

In this thesis I use the terms emotion, feelings, and affect. Affect and emotion have been polarised, with affect taken primarily as nonconscious, unintentional, and relational intensities of the body, and emotion as more fixed, cognitive and discursive (Schmitz and Ahmed, 2014; White, 2017). I am unconvinced by the idea that there is a significant gap between emotion and affect and prefer to follow theorists such as Sara Ahmed (2014) and Sianne Ngai (2004) in questioning the clear distinction between the two. Throughout this thesis, I have tried to use everyday language, as much as possible. For this reason, I tend towards using the terms, emotion and feelings, which were more commonly used in daily language in Santa Cruz[4]. However, while I see emotion as based in both judgements and corporeal responsiveness (Leavitt, 1996; Ahmed, 2004), I attribute to 'emotion' the possibility of dynamic intensity and relationality more often associated with affect (Schmitz and Ahmed, 2014) and in affect I also see the possibility of evaluation and intentionality (Ahmed, 2010). I acknowledge, too, the challenges in apprehending emotion, that some have argued are reserved for the slipperiness of affect (White, 2017). These theoretical perspectives on emotion are embedded in my analysis of everyday life near a large, powerful and polluting corporation.

Similarly, there have been a number of debates around what constitutes 'emotion' and 'feelings'. Psychologists, philosophers, and neurobiologists, amongst others, have asked to what extent are different emotions characterised by concomitant

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[4] *'Emoções'* and *'sentimentos'* were terms commonly used in Santa Cruz.

bodily states (Prinz, 2005), what is the overlap between 'emotions' and 'feelings' (Demasio, 2004), and how universal are 'emotions' (Prinz, 2004)? As with anthropological concerns to distinguish between 'emotion' and 'affect' there has been an academic focus on categorisation and terminology when understanding what 'emotion' is. It is generally held that emotions and feelings are not the same. One can 'feel' itchy, cold or hungry, for example, and these 'feelings' are not 'of emotion' (Prinz, 2005). It is argued that the conflation of the two is the norm in 'folk psychology' or common speech. In this thesis, I make conscious use of 'common' understandings of emotion, with the aim of stretching our comprehension, rather than seeking neat definitions. During my fieldwork, when a friend or participant said 'I feel' I have taken that as worthy of investigation. I identify 'feelings' (that are 'of emotion') throughout this thesis.

It is not my focus to dissect different 'types' of 'feeling' or 'emotion'. Psychologist Klaus Scherer, for example, has argued that the term 'emotion' should be separated from 'feelings', 'attitudes', 'moods' and 'interpersonal stances' (2005). In this thesis I do quite the opposite. Here, I follow Sara Ahmed in her understanding of this type of categorisation[5] as an activity that can allow researchers to do certain things, but that does not always correspond to matching neat distinctions in the world (Schmitz and Ahmed, 2014). She explains this well, "you can break an egg to separate the yolk from the white, but you have to separate what is not separate. Separation is an activity, not a noun" (Schmitz and Ahmed, 2014, p. 98). In this sense, for example, I do not find it useful to delimit my representation of emotions to either short-term emotional episodes, or to longer-term emotional stances (Menges, 2017). Rather than dissecting feelings and emotions into distinct phenomena, such as those that Scherer proposed, it is the everyday experience of emotion that is interesting for an in-depth understanding of environmental disputes.

In my representations of 'feelings' / 'emotions' associated with the TKCSA I have found myself describing generalised attitudes, affective dispositions, specific moods, as well as impacts on behaviours and interpersonal relationships, For

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[5] Ahmed argues this in relation to the distinctions made between affect and emotion.

example, my investigation of feelings associated with the presence of drug traffickers, or a militia, in Santa Cruz, could be considered resolved at the point of identifying 'fear'. Instead, I describe a common aversion towards getting involved, a sense of vigilance in everyday social interactions, perceptions of moral correctness associated with not getting involved and an element of satisfaction or pride in some interlocuters' stories about how they survived. While I do name emotions such as fear, anger, and sadness, I have tried to go into more detail. To stop our interrogation of feeling, at the terms we normally associate with emotion, such as 'happiness' or 'anger' etc. can limit the discussion of emotion. I aim to pay attention to the granular experiences of emotion, and I find that this requires more elaborate description.

I, like Beatty, use terms such as 'emotion' for convenience (2005), but within this term I have aimed to include the widest possible, and most accurately described, set of phenomena. I have sought an enlarged, conception of emotion that acknowledges the complexities, ambiguities, and inconsistencies of emotion, as found in the field (Beatty, 2005). Emotion is treated as both cognitive (including judgements about things) and as a kind of visceral bodily responsiveness (Leavitt, 1996; Ahmed, 2004; Schmitz and Ahmed, 2014). It is in this sense, that I also include, within my broad understanding of emotion, feelings that might not immediately come to mind as 'emotions'. For example, in this thesis I use an emotional account of mistrust and blame. From this perspective, blame carries with it emotional reactions (such as anger, disappointment, or contempt, for example) attached to judgements made about the morality of causation and responsibility (Menges, 2017). Similarly, mistrust includes both affective and cognitive aspects (Mühlfried, 2018). Mistrust in the João XXIII area of Santa Cruz is the overarching topic of the first section of this thesis. It is just one of the many feelings that I explore here. However, it is one that has required investigation of various other topics, such as trafficking and the militia. It is the focus of the first section of this thesis, not because mistrust characterises environmental conflict more than other emotions, rather because it is deeply and complexly entrenched in elements of the social

world in João XXIII that require explanation and cannot be restricted to a single chapter.

Indeed, the complexity I allude to here, the ways in which emotion must be located in the interstices of everyday life, is reflected in the structure of this thesis. The main topics dealt with in each chapter do not, in every case, deal directly with, and are not based on direct questioning about, the emotional impacts of the factory. Emotions may seem scarce at first; relatively sparsely scattered throughout other subjects. It is this attention to feelings that happen amidst the rest of life, which I posit is necessary to capture the breadth, complexity, and details of emotional experience of industrial pollution and environmental conflict. However, emotion accumulates through the length of this thesis and feelings go on to fill entire chapters as this thesis approaches its ending. In line with the build-up of focus on emotion, the conclusion focuses on the place of emotions in the experiences and understandings of industrial pollution and environmental conflict.

Santa Cruz, environmental injustice and the TKCSA

Santa Cruz, a neighbourhood of the municipality of Rio de Janeiro, is often described as a typically 'peripheral' urban space. The term '*periferia*' commonly represents a number of socioeconomic associations (Pallone, 2005). Urban 'peripheries', in Brazil, are generally defined as having a lack of sufficient infrastructure and services (Ribeiro and do Lago, 2001), low-income populations (Pero and Mihessen, 2013) and populations that are subject to prejudice (de Jesus, 2021). Santa Cruz is subject to these types of socio-spatial stigmatisation (de Souza 2021) and has been defined as socio-economically 'vulnerable' (Vianna, 2020; Malta and da Costa, 2021). The region has some of the lowest indicators for income and life-expectancy of the West Zone of Rio de Janeiro (Observatório Sebrae/RJ, 2015).

Santa Cruz has a majority black and brown[6] population (Casa Fluminense, 2020, p. 13). The myth of 'racial democracy'[7] is no longer advocated by most as a realistic representation of the status quo in Brazil (Fry, 2000; Cicalo, 2014). However, this idea is thought to have had the effect of minimising the perception of the problem of racism (Da Costa, 2016), and led to a tendency to explain social inequalities primarily in terms of class discrimination, rather than racism (Guimarães, 2001; Cicalo, 2012; Salata, 2020). More recently substantial evidence has linked classism and racism; as black people make up a significant proportion of the poorest segments of the population (Pires and Guimarães, 2016) and earned, on average, 42% less than their white counterparts in the first two decades of the 21st Millennium (Salata, 2020, p. 3). According to the Perreira Passos Institute, Santa Cruz ranks 124th of the 159 neighbourhoods analysed in Rio de Janeiro, in terms of its housing quality, access to basic sanitation, income and access to higher education (IPP, 2022). The area also suffers from high rates of unemployment, a shortage of public spaces and a lack of investment in cultural infrastructure (Sampaio, 2020).

Historical changes of the area's demographics have been linked to changes in land usage in the area. Santa Cruz was the site of indigenous villages until it's colonisation by the Portuguese in the 16th Century (Pires and Guimarães, 2016). In 1590 lands in the area were given to a Jesuit Order which used slave labour to establish a large estate until the Order was expelled in 1759 (Cavalcanti, 2003). At this point the fazenda, including its slaves and slave houses, became property of the Portuguese Crown (Almeida and Izaias, 2020). In 1878, the train station of Santa Cruz was inaugurated, and this opened the area to population increase and new, more industrial usages of the land (Pires and Guimarães, 2016). In 1881, a slaughterhouse was inaugurated in Santa Cruz, and this too led to its growth as an urban settlement (Almeida and Izaias, 2020). As the first Brazilian Republic was

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[6] This is a translation of '*população preta ou parda*', as defined by the Brazilian Institute of Geography and Statistics and referenced by the Casa Fluminense (2020).
[7] The idea that racism has played a relatively minor role in social inequalities in Brazil (see Fry (2000) and Guimarães (2001) for a more detailed description of the development and conceptual structure of this idea).

established much of the region was occupied by the armed forces and some land was sold off to become part of the urban expansion of the city of Rio de Janeiro (Cavalcanti, 2003). The area was increasingly industrialised in the 1960s, leading to the development of the Industrial Zone of Santa Cruz in the 1970s (Pires and Guimarães, 2016). The western edges of Rio de Janeiro, including Santa Cruz, saw an acceleration of urbanisation in the late twentieth century, characterised by the irregular, and mostly illegal, subdivision of land, to house those who were unable to access the formal housing market (Cavalcanti, 2003; Monteiro and de Mendonça, 2004). The area is no stranger to industrial disasters. In 1996, the zinc smelter *Companhia Mercantil e Industrial Ingá's* containment dike broke, contaminating Sepetiba Bay (located just to the West of Santa Cruz) in one of Rio de Janeiro's worst industrial disasters (Cetem, 2012). It is in this context that the TKCSA was sited in Santa Cruz, having received financial incentives from the Brazilian Development Bank to base itself in the area (Rocha, 2022). In Santa Cruz, then, population growth (particularly among low-income, black people), State abandonment of the population leading to deteriorating living conditions, and the industrialisation of the area have gone hand in hand.

Various authors have highlighted these trends, pointing to environmental racism. Pires and Guimarães argue that the city's expansion has been marked by the displacement of its 'dirty' urban functions to more distant locations inhabited by vulnerable populations (2016). In the case of Santa Cruz this has included the establishment of the city's primary slaughterhouse in the area, the development of the industrial zone in the 1970s and siting of ThyssenKrupp's Companhia Siderúrgica do Atlântico there in the 2000s (Pires and Guimarães, 2016). The population of Santa Cruz, according to these authors, is vulnerable to the establishment of this type of development (Rocha, 2022), and these types of industrial projects can only go ahead because they are able to distribute the resultant negative impacts in vulnerable areas (Tavares, 2019). Another, linked perspective is to identify Santa Cruz as a 'sacrifice zone', or a stigmatised space where "the physical and mental health and the quality of life of human beings are

compromised in the name of 'economic development' or 'progress' – but ultimately for the sake of capitalist interests" (de Souza, 2021).

In this thesis I take this as my starting point. The case of the establishment of the TKCSA in Santa Cruz is clearly an example of environmental racism and injustice. There have been several recent academic articles which cite the environmental racism involved in the siting of the TKCSA in Santa Cruz and which argue that the area has become a 'sacrifice zone' (de Oliveira, de Castro and de Carvalho, 2011; Pires and Guimarães, 2016; Tavares, 2019; de Souza, 2021; Rocha, 2022). These articles have all explained the situation of the TKCSA in Santa Cruz in this manner. For this reason, I do not repeat these arguments, except insofar as I have elaborated above. However, these issues emerge in my discussion of the industrial pollution in the area, the resultant environmental conflict as well as associated emotional impacts.

Thesis structure

The emphasis on emotion grows throughout this thesis. The first few chapters build the context necessary for a more in-depth understanding of emotion in the environmental conflict surrounding the TKCSA, and they contribute to our understanding of mistrust. The concluding chapter of Section 1 is focused on mistrust in the area and the ways that it occurs in the relationship between the TKCSA and the people who live around it. This is not because mistrust is more important than other feelings embedded within the dispute, rather it is because of the many complex ways that mistrust emerges in Santa Cruz. The second section of this dissertation looks at different aspects of feelings associated with the TKCSA; emotional responses to the violence of corporate communications, blame for ill-health, emotional protest, and the ways that relationships are impacted by the emotions brought up by the conflict with the TKCSA. All these chapters feed into a conclusion which focuses wholly on emotion. It is the focus on emotion in the interstices of life that leads to this structure. However, this also reflects the ways that I, the ethnographer, was able to perceive emotions as they emerged; little by

little, increasingly and cumulatively, as I learned more about what it was to live by a large, polluting corporation.

To bring this introduction to a close I offer a chapter breakdown of this thesis. It begins with a methodology chapter in which I document the ethnographic approach I took in fieldwork as well as some of the challenges involved and some ethical considerations. This dissertation is then structured into two sections. The first includes four chapters, culminating in a conclusion that deals with trust and mistrust. Chapter 3 provides a general introduction to the area where I undertook fieldwork and explores memories of the place as a kind of paradise, and as the site of trafficking-based conflict. Chapter 4 focuses on understandings of militia violence and the ways militia actions have affected experiences of the environmental conflict surrounding the TKCSA. Chapter 5 discusses extra-monogamous intimate and sexual relationships in the João XXIII area of Santa Cruz and Chapter 6 concludes this section by outlining an argument relating to trust and mistrust around the steel mill. Section 2 begins with a chapter dealing with the complaints put forward by people living near the TKCSA. Chapter 8 uses an ethnographic encounter to illustrate the violence entailed in the language of public relations and 'corporate social responsibility' and explores some emotional responses to corporate communication. Chapter 9 considers the place of blame in some of the explanations for ill-health in the João XXIII region of Santa Cruz. Chapter 10 follows some of the ways in which emotion played a part in forms of protest against the TKCSA. Chapter 11 deals with some of the relational aspects of environmental conflict in Santa Cruz. Chapter 12, the conclusion to this thesis, outlines, and picks out examples of, the ways in which emotions played an active role in experiences of pollution and conflict surrounding the TKCSA. In so doing the conclusion summarises the main arguments of this thesis and considers their implications for broader anthropological discussions of pollution, toxic exposure experiences, environmental conflict, and a changing climate.

Chapter 2. Methodology

Introduction

This thesis is based on fieldwork conducted between September 2014 and January 2016. During fieldwork I used a mix of methodologies, and I have found that this has been crucial to capture some of the complexity involved in understanding the perceptions and embodied experiences of living with large-scale industry. The first element to my fieldwork was my residence in the Conjunto Alvorada area, which borders the steel plant which was then called the '*ThyssenKrupp Companhia Siderúrgica do Atlântico*' (TKCSA) and is part of what was loosely called the 'Joâo XXIII' area of Santa Cruz. My 'kitchenette' formed part of a family home located roughly 150 metres from the factory's boundary fence. I lived within a family for thirteen months, after which time I moved into a house (one street nearer to the factory's perimeter) with my partner. Overall, I spent fifteen months living in the Conjunto Alvorada and building up a network of friends. The second element of my fieldwork was my participation in a group of local residents campaigning against the TKCSA, which have been dubbed the '*Pare TKCSA*', or 'Stop TKCSA' group. My time spent with Stop TKCSA led to a working relationship with the national NGO, '*Instituto Politicas Alteranativas do Cono Sul*', or Instituto PACS, (the Alternative Politics Institute for the Southern Cone), based in South Rio de Janeiro. The experiences I had living in the Conjunto Alvorada, and with the Stop TKCSA group formed the mainstay of my fieldwork.

About half-way through my time in the area, a local fisherman and member of the Stop TKCSA group asked me to film some protests that were being organised by fishers against the construction of a barrier across the São Francisco River. I spent a good deal of time together with fishers, getting involved in their campaign to stop the construction of the barrier. I also interviewed, and attended meetings with staff of the Oswaldo Cruz Foundation, a national public health institution that had played an important part in the campaign against the TKCSA since its installation. I attended many 'corporate social responsibility' events in the local area, paying

particular attention to the company's health interventions. In addition, I collected and analysed written material relating to the TKCSA and to issues of health and pollution in the area. Finally, in the last quarter of my time in the Conjunto Alvorada, I started to work in the local state-run health centre, after considerable time negotiating permission. These activities supplemented my participant observation in the Conjunto Alvorada, and with Stop TKCSA, all of which I will explain in greater detail below.

Methods

Participant observation

Most of my ethnographic material has come from my observations and experiences in the place where I lived, in the Conjunto Alvorada, in the João XXIII region of Santa Cruz, Rio de Janeiro. The people I had most contact with were living in the streets neighbouring my own temporary home in the Conjunto Alvorada. Through taking part in various activities, I also met and developed relationships with people living in other areas neighbouring the TKCSA steel plant: São Fernando, Chatuba, and the João XXIII Avenue. This geographic make-up of research participants reflects the common friendship groups of the people in the Conjunto Alvorada, who tended to have friends and acquaintances in neighbouring areas. This formed the core of my fieldwork and allowed me to understand ways of being, social relationships, attitudes and norms in my fieldsite. During this time, I, together with the participants in my research, built relationships from scratch. These relationships snowballed outwards from those I had with the people I lived with, through introductions to neighbours, friends, and relatives as well as through contacts made in my regular activities. As I began to meet people in casual contexts I accompanied them in their everyday practices; sitting around peoples' houses on the pavement, going to the bar at the end of my street, attending church, shopping regularly at the local vegetable shop or mini-supermarket and attending social events such as street parties or open-air funk dances. At their most basic, these 'ethnographic encounters' were, as Tim Ingold puts it, simply a matter of talking with people, asking questions, listening to their stories, watching what they do and joining in (2014).

While participant observation was certainly made up of these relatively simple activities, it was necessarily accompanied by other related and more difficult tasks. The tension between participation and observation that has been much discussed in anthropological considerations of methodology, was one that I struggled with (Hastrup, 1992; Bourdieu, 2003b). Finding a balance between intimacy and distance; between participating fully at the expense of considered observation, and meticulously observing instead of taking part (Hume and Mulcock, 2012). I came to feel that this got easier with time and practice, and was about understanding that understanding comes through being, and is done in a very practical sense (Ingold, 2014). In some ways the most challenging aspect of fieldwork was to remain consistently reflexive. Rather than to experience something given and prior in the events and conversations around me, I tried to situate myself, in my mind and in my fieldnotes, as present and fully part of experiences (Clifford and Marcus, 1986; Tyler, 1986). To be conscious that I was asking questions, listening, talking, observing, making connections with others, and taking part, and that these processes were not after the event, as if 'culture' existed separately from the scenes in which I was implicated (Mol, 2002). To be aware of my positioned and partial perspective in particular places and times (Clifford, 1986; Haraway, 1988; Bourdieu, 2003b; Strathern, 2004). Of course, these were ideals to be worked towards, and tasks implicated in the writing of ethnography, as well as the doing of it. This is an ongoing project, that has continued through my writing.

Interviews

I carried out qualitative in-depth and unstructured interviews with neighbours and friends, which were similar to my daily conversations with them, although the fact that they were pre-arranged led to the generation of a slightly different format and different types of information. I interviewed public health researchers from the Oswaldo Cruz Foundation, staff of the NGO *Instituto Políticas Alternativas do Cono Sul* (Instituto PACS), members of the Stop TKCSA group campaigning against the factory, health professionals working at the area's state-run clinic and teachers at the local school. The selection of the people I interviewed was in some ways

inevitably haphazard. I interviewed neighbours who seemed interested and receptive in everyday conversation. I interviewed people who were suggested to me by Stop TKCSA members because of their particular experiences of the factory and its pollution. I interviewed teachers who had a spare hour between classes, in the school where I gave English classes. I interviewed the PACS staff members who had time to be interviewed, and clinic staff whose timetables fitted in with the days I was able to spend at the clinic. With a few people I conducted between two and three repeat interviews, and this was the result both of my understanding that this person could provide fruitful ethnographic material and the person in question's enthusiasm for the project. Normally this happened in the context of a developing friendship.

During my interviews with local people and Stop TKCSA members, I tried to draw out interviewees' life histories in order to understand the amalgamation of people's life experiences through the complex intertwining of the material conditions of their context, their identities, expectations and aspirations. The aim was to access some of the complexity of peoples' lives, their dynamic social relations and the nexus points of entanglement between people, illness, the struggle against the company, government policies and economic shifts, that people expressed in personal narratives. In my interviews with clinic staff, PACS staff and public health researchers at the Oswaldo Cruz Foundation, there tended to be a focus on their experiences of, and roles in, the environmental conflict in Santa Cruz, and their experiences in the area, rather than approaching interviews through an exploration of life histories. Towards the end of my time in the Conjunto Alvorada I organised and undertook focus group discussions with staff at the local clinic. For these interviews I had a list of possible topics of discussion and potential questions, from which I was happy to depart.

My interviews were conducted face to face, having been previously arranged. I interviewed participants in a variety of places of the interviewee's choice. When conducting interviews I provided a copy of the approved consent form for each participant, and I kept a signed version of the form for my own records. At the

beginning of each interview, I explained my research and went through the consent form with participants. I recorded almost all of my interviews, transcribing them (and sometimes paying for transcription) as soon as possible.

Documentary and archival study

Anthropology is not reducible to fieldwork, which is, as Rabinow asserted, one method among many (1977). Before, during and since my time in Santa Cruz, I have read much of the plethora of public documentation relating to the industrial pollution of the Baia de Sepetiba and the presence of ThyssenKrupp's CSA. In this thesis I have referred to the 'Terms of Adjustment of Conduct' (or TAC); an agreement signed by ThyssenKrupp CSA, the Secretary of State for the Environment, and the then State Environmental Engineering Foundation (FEEMA) with the aim of improving TKCSA's environmental and social conduct in Santa Cruz (Viegas, Pinto and Garzon, 2014). This document was designed to be a tool establishing the adaptations the company must make to operate in accordance with environmental legislation (Secretaria de Estado do Ambiente, 2012; Lepercq and Norris, 2016). I have also made use of the statements made in NGO papers, Stop TKCSA's open letters, TKCSA adverts and public relations documents, paying particular attention to the roles of documentation in the controversy surrounding the TKCSA. I have sought to understand the ways in which power is mediated and reflected in these different documents (Riles, 2006; Trundle and Kaplonski, 2016). I have made use of these documents to draw upon expressed understandings and the incongruities between what is said and what is done (or between institutional policy and practice) (Hoag, 2011). My interest has been to look at how documentary practices interact with other practices involved in environmental conflict (Fortun, 2001; Li, 2009, 2015). To this end, my use of documents has been integrated with other methodological tools and has supplemented my main methodological focus on participant observation (Das, 2004; Cabot, 2012).

Where and with whom?

Conjunto Alvorada and the João XXIII area

Finding somewhere to live in the João XXIII region of Santa Cruz, was difficult, but was facilitated by an academic who had been an active part of the Pare TKCSA group. After three weeks in the South Zone of Rio de Janeiro, trying to find people who had connections with people living in the Joao XXIII area of Santa Cruz, I realised that connections between the two areas were a challenge to come by. The South Zone of Rio de Janeiro has a long history of middle-class wealth (Ribeiro *et al.*, 2000; Herzog, 2015) while, as discussed in the introduction to this thesis, parts of the western area of Rio de Janeiro, and Santa Cruz in particular, have seen an influx of low-income residents since the 1970s (Cavalcanti, 2003; Perlman, 2005). The area is cut off from the South Zone by mountains (Arias, 2013), it is the poorest of the three zones of Rio (Perlman, 2007), it has high unemployment and poor transport links (Machado, Pero and Mihesse, 2015) and it is well known for occasionally warring traffickers and militia groups (Zaluar and Conceição, 2007; Arias, 2009). These elements of structural separation between the place where I was initially staying, in the South Zone of Rio de Janeiro, and Santa Cruz, meant that the help I received, to find a place to stay near the factory, was much needed.

I stayed in a kitchenette that formed part of a family home. I was taken into this family and shared family life with them for 13 months (after which time I moved to a separate house, when my partner arrived in Santa Cruz). The family was made up of a grandmother (in this chapter I will refer to her as Anita)[8], two of her children, three of her grandchildren, a few other people who stayed when they needed a place, and a varying number of dogs. We would sit out on the pavement outside the house drinking beer, fizzy drinks, or sweet coffee, or sit on the floor of Anita's room, eating dinners that she had cooked for the whole family. Throughout my time in the Conjunto Alvorada I shared long, daily conversations with Anita, who I respected and liked. I also became good friends with Anita's son and daughters and, while living with Anita and her family, I met their friends, and took part in street activities. These were mainly sitting outside on the edge of the pavement trying to catch a breeze, keeping an eye on the street's children together with neighbours, chatting, going to other people's houses, and attending street parties. I fully

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[8] All pseudonyms have been changed in each chapter to support anonymity.

participated at these times; listening to people's stories and hopes for the future and offering my own, playing with children, playing the most recent Funk songs on our phones, and becoming emotionally invested in people's daily dramas, gripes, and plans.

Most of the people living in the area, that I got to know, were evangelical Christians, with only a few Catholics or members of Afro-Brazilian religions (known locally and pejoratively as Macumba). I soon saw that it would be important to attend one of the many evangelical churches in the area, and I began going to services at a couple of different evangelical churches, before focusing on one in particular. I taught English to children in the school behind my house, meaning that I taught the children of various local residents. This helped me to enter into the everyday conversations in the area, to a certain extent. Towards the end of my stay in the Conjunto Alvorada I started work in the local clinic. My presence there for almost four months, my journeys back and forth and the days I spent accompanying community health workers, offered more opportunities to chat with people on an informal basis.

Stop TKCSA

The group of around ten to fourteen local residents who met at least once a month to organise the campaign against the TKCSA allowed me to come to their meetings, to observe, write notes and to participate in planning. The members of this group were mostly aged between about 40 and 85 and mostly men, with the exception of three regularly attending women. They seemed to share a strong sense of the injustice they understood to have been inflicted upon them with the arrival of the TKCSA. Stop TKCSA group members were not immediately comfortable with my presence there. I understood this when I, quite naively, offered to help renew a blog about their campaign. While members nodded that it would be a good idea, and seemed to give me the go ahead, I realised when it came to organising the blog meetings that very few people were comfortable giving me their telephone numbers. One of the members told me that he would prefer to organise blog meetings through an already established member. It was clear to me that this

was a sign to take a step back and observe for a while, until later in the year when I began to get more actively involved.

Aside from the Stop TKCSA meetings, I attended other events and activities with the group. These included photo exhibitions, workshops, meetings with politicians and lawyers, campaign tours, televised news interviews, publicity events, parties and barbeques and members' funerals. While I met some group members in my everyday life in the Conjunto Alvorada, São Fernando or the João XXIII, I only saw most members at group activities, or at interviews which we had pre-arranged. There were exceptions to this rule; Dona Ana, an active member, took me under her wing, visited me at my home, regularly invited me to her house for a juice or lunch and introduced me to her daughters, who would also become my friends. Similarly, João, a local fisherman who was a very active group member, became a friend as we got to know each other. I then got to know his daughters and their families, and we regularly shared coffee at João's house. It is from the relationships I enjoyed with Dona Ana and João from Stop TKCSA, and my relationship with the family with whom I lodged, that I learned the most about the area and about social relationships there.

Instituto PACS
The NGO, '*Instituto Politicas Alternativas do Cone Sul'* (variously translated as the Institute of Alternative Policies for the Southern Cone of Latin America, or the Alternative Politics Institute for the Southern Cone of Latin America), more commonly known as 'PACS' or 'Instituto PACS', had been involved in the environmental conflict surrounding the TKCSA since its beginnings and was heavily involved with the Stop TKCSA group. I spent time with PACS staff at the Stop TKCSA monthly meetings, at campaign events and at the various moments when an opportunity came up for members of the Stop TKCSA group to gain public or institutional attention for their cause in South Rio de Janeiro. Towards the end of my stay in Santa Cruz, I began to see PACS staff members independently, before or after meetings, for lunch or coffee. I interviewed members of staff, and had many opportunities to speak with them casually, while on protests or on

journeys to meetings. PACS staff seemed wary of me at first. Prior to my fieldwork I had contacted them repeatedly, and while I received one reply, nothing further materialised despite my efforts. When I first interviewed one of the members of staff, she told me that:

> "we have been concerned about who you will be, and what you will be doing. We have discussed that your research will have to be very carefully done. But we also don't want to create a relationship of paternalism with the members of the group. We don't want to patronise them".

While NGO staff members may have felt understandably wary about my work, they made a conscious decision that it was important to avoid elements of paternalism in their relationships with campaigners. In different ways, the staff of PACS appeared to accept that I was there, and that, with care, they could help me and perhaps even work with me to do various things. For example, eventually some staff members asked me about my understandings of what was going on amongst the group of protesting fishers in Santa Cruz, they occasionally asked my opinions about aspects of life in the João XXIII area, communicated their perspectives on my work, and discussed their own campaign strategies with me.

Fishers

About halfway through the time I had allotted to staying in Santa Cruz, an active member of Stop TKCSA and a local fisher, approached me to request that I film and thereby 'document' the protests of local fishermen and fisherwomen. I had no specific training in filmmaking, but the fishers didn't seem to want polished films, as much as a record of their protests. I took my camera along to protests, fishers' meetings as well as meetings between the fishers and lawyers, local politicians and representatives of the Association of Companies of the Industrial District of Santa Cruz and Adjacent Areas (AEDIN), of which the TKCSA is the largest company. This work increased opportunities to talk with fishers and to interview them about their experiences of their work since the steel factory had opened.

Posto de Saúde

My work in the Posto de Saúde (the local health centre forming part of Brazil's publically funded healthcare system, the *Sistema Único de Saúde* or SUS) came late in my time in the João XXIII area. After about three months in the field, I realised that it would be important to understand the workings of the local health clinic. People often talked about their opinions of the health clinic and this seemed to merit further investigation. Gaining permission took six months, and only left me with three and a half months to spend in the clinic. I spent four to five mornings or afternoons a week in the clinic, hanging around the lunch area with staff, attending team meetings, interviewing staff individually and in groups, interviewing patients, sitting at the admissions desk and visiting families with Community Health Agents.

TKCSA

While living in the Conjunto Alvorada I attended various local events that the TKCSA put on for local residents. I preferred to attend these events with friends or the family with whom I lived (and they would often go to TKCSA's events) however sometimes I attended alone. According to the company, its CSR programme was split into four main areas; education, sport, culture and citizenship (ThyssenKrupp CSA, 2015). The company organised regular local events that focused on issues such as littering, pedestrian safety and safety in the home, encouraging dental hygiene, providing general health checks and facilitating the replacement of personal identity documents. I paid particular attention to the varying ways in which the company articulated itself and approached the society within which it functioned.

During my time in Santa Cruz, I was also conscious of the other ways that TKCSA was present in everyday life. The TKCSA's presence in Santa Cruz was very pronounced and this was not limited to the 9 Km2 of the factory itself. The company's 'corporate social responsibility' activities were advertised extensively on billboards, on the signs above the businesses and organisations they funded and on the ubiquitous sports kits provided for their sponsored children's sports activities. Public space was routinely given over to the CSA, as it put its signage on public sports fields, and held its events in state-school grounds. At bus stops,

the imposing rhythms of an advertising voice were projected through the overhead loudspeakers, announcing the CSA's social projects and events. Fifty thousand copies of the CSA's monthly magazine, 'Alô Comunidade' were posted through every letterbox in neighbourhoods surrounding the factory, and left in piles, free for the taking, at state-run health centres, hospitals, schools, and businesses. I was focused on the TKCSA's presence in everyday life partly because I was already inclined to be aware of such things due to my interest in the environmental conflict in the area, but also because the CSR activities of the TKCSA were so clearly present.

Anonymity and data management

It was essential to let members of the Stop TKCSA know how I would be storing information, and to talk about exactly *how* anonymous informants could be kept in my work. Before starting fieldwork, I developed a data management plan which covered issues of anonymity and electronic management of fieldnotes, theft of data, password protection of my hard drive and computer, encryption of data and management of interview recordings and transcriptions. I have used pseudonyms for all the people I mention in the thesis. I have also changed the pseudonyms used for any particular individual, on a chapter-by-chapter basis throughout this thesis, and sometimes multiple different names are used for one individual within chapters. This is to further impede any identification of individuals whose words and actions are recorded here. I have omitted details which I feel could lead to identification of people I mention. I have also refrained from using pictures that include people's faces, in order to prevent easy identification of individuals. The exception to this is my use of still images from the film '*Treliça'*, which is freely available on the Internet.

Along the way, I found that I needed to make minor adjustments to my data management plan. For example, in my first visit back to London I used my funding to buy a very cheap laptop, in order to be able to take it with me to meetings and into central Rio de Janeiro, rather than my more conspicuous MacBook Pro. I kept the minimum amount of data on this new, cheaper computer, lest anything happen to it. During fieldwork this data management plan boiled down to a manageable

system in which I did my best to keep all my data private. The plan included security measures such as, anonymisation of all fieldnotes, password protection on laptops, storage of audio recordings on a password protected hard drive. I continued to be attentive to the safety of my data, to my own safety, and that of those around me, throughout the time I was in Santa Cruz.

Fieldnotes

During fieldwork I mostly kept a field diary and an audio recorder with me. I would, when able, transcribe these notes and recordings into my field notes on my computer. However, when I attended meetings I would write field notes directly on my laptop. I did not keep separate personal diaries or distinguish between different types of field notes – unlike Lederman (1990) everything I wrote (except for records of pseudonyms) was kept together in one chronological set of electronic field notes. I did, however, also keep a box of leaflets, magazines, and objects that I collected in my time in Santa Cruz, to which I also referred when writing.

Upon my return from Santa Cruz, I spent considerable time immersed in the details of my fieldnotes, reading and re-reading them, before I began writing. Whilst fieldnotes are arguably always important to anthropologists' work (Lederman, 1990; Sanjek, 1990; Pacheco-Vega, 2019), I was particularly reminded of their necessary centrality by repeated interruptions for periods of maternity leave during my writing. After each period away from writing I would go back to my fieldnotes to re-read them. I also undertook similar processes of reading and re-reading before embarking on the construction of each new chapter. During this immersion in fieldnotes I highlighted patterns and repetitions as well as remarks, sections of interviews or events that I considered to be particularly meaningful in relation to other elements of my fieldnotes or in relation to my own feelings and reflections about them. As I went on to read academic writing about particular topics that I had identified as important from my fieldnotes, I revisited my fieldnotes to aid my memory and to be able to reassess them in the light of that reading. A certain amount of listening to my own feelings about what was important, both during fieldwork, and in my memory of events, has prompted me to search my fieldnotes

frequently for specific issues (using software search tools). In these ways my fieldnotes have been an essential part of my writing.

Challenges

Language

I spoke fluent Spanish and Catalan before starting my PhD, and I believed that this would help me to learn Portuguese. Once my PhD was underway, I undertook a three week-long Portuguese language course in Rio de Janeiro in December 2013, which was designed for Spanish speakers. This course was funded as part of the Wellcome Trust Society and Ethics Doctoral Studentship (grant number 101941/Z/13/Z). I also completed a year-long language course at University College London, in the first year of my PhD - the academic year of 2013-2014. By the time I arrived in Rio de Janeiro, for my main period of fieldwork (Autumn 2014), I was quite able to understand most of those who so generously spoke slowly to me in Brazilian Portuguese. However, I was, at that point, unable to respond well in Portuguese and would normally fumble back some kind of poorly adapted 'Portuñol'. I found this to be a challenge, and I would think that most people who encountered me during this period also found communicating with me quite challenging. It was, though, a challenge that I was used to, having previously learnt languages by immersion, rather than through academic study. These difficulties also meant that I listened quite considerably more than I spoke. This was a habit that I felt was beneficial more generally, and I made efforts to continue this, even after I had developed a greater ability to speak Portuguese. As there was no alternative, I quite quickly picked up sufficient spoken Portuguese to be able to, at the very least, prompt that I wanted to continue to hear more about what was being said. In time I came to be able to communicate more effectively.

Political sensitivity

Throughout Latin America, extractivist and large-scale industrial projects have been associated with conflict and violence (Veltmeyer, 2012; Caxaj *et al.*, 2013; Observatorio de Conflictos Mineros de América Latina, 2019). I had already become aware of the links between violence and large-scale industry in Latin

America when I changed my initial PhD proposal. I had to cancel my first project, which was based on a mine in Guerrero, Mexico. because of increasing violence against anti-mine protesters. Early in my pre-fieldwork research into the unfolding environmental conflict in Santa Cruz, Rio de Janeiro, I began to understand the depth of political sensitivity surrounding the conflict over the presence of the TKCSA. Militias have varying levels of control in different areas of Santa Cruz (Zaluar and Conceição, 2007; Arias, 2009) and they are reported to have threatened anti-TKCSA campaigners. One such protester was placed in a witness protection programme because of these threats (Porto et al., 2011a; The Sacrifice Zone Project, 2012). During my fieldwork I learned that the peace in Joao XXIII area was sometimes fragile, and this situation was made more complex by a recent history of extreme violence. I was also informed by an academic who had been sued by ThyssenKrupp Companhia Siderúrgica do Atlântico, along with other researchers and academics, that I must be careful in relation to the company too. This academic warned me that the company used tactics of intimidation to silence researchers. It is fair to say, then, that I entered this field site, with its history of trafficking and violence, its militia control and intimidation of anti-TKCSA protesters, its corporate interference with academic research and its somewhat divided local opinions about the factory, with some trepidation. Because of these factors I was extremely careful to maintain anonymity in my fieldnotes (see above).

In this context, I tried to spend the first few months of my fieldwork in a balance between careful reflection and a slow and considered search for ways to integrate myself into local community activities. I found Stacey Leigh Pigg's insistence on the importance of sitting around, quiet contemplation, noticing and reflecting in ethnographic approaches, extremely helpful in the first few months in the Conjunto Alvorada (2013). Pigg's suggestion also seemed to fit with Alex Nading's calls to 'slow down' in order to fully appreciate the complexity of living in a toxic world (2020, p. 219). This required a constant level of reflection about how best to 'be' in this new setting in order to gain some general understandings of the area and the dynamics of social relationships there. This was no easy feat, and I didn't always get the balance right, as my desire to be 'active' and 'productive' at the beginning

of fieldwork was strong. This conscious emphasis on careful and slow reflection was important to me, in the context of political sensitivity and against a background of the possibility of violence. I had planned to allow the time to become familiar with the situation in Santa Cruz before becoming explicitly involved, or seen to be involved, with any particular group. However, my entrance into the field was eventually facilitated by a member of the Stop TKCSA group, which somewhat precluded that possibility. Still, time spent feeling my way through new relationships, building trust and learning new ways to interpret interactions, was useful for clarity about what exactly I needed to be doing in Santa Cruz, as well as who other people were, and what my relationships with them could be like.

I used various other approaches in my work because of the political sensitivity of the setting. I quickly developed an understanding of just how important it was to emphasise my independence from the TKCSA and all other company's working in the area. Company representatives had previously undertaken some research with local residents, which, many later complained to me had been 'used against them', and residents often (perfectly reasonably) wanted reassurance that I was not working together with the company. I also found it useful to establish with participants of the Stop TKCSA group, and my neighbours and friends, that I did not work for the NGO, Instituto PACS. Explicit independence may be an important methodological tool, more generally, in the ethnography of environmental conflict (Báez and de Paz, 2020). Similarly, the importance of maintaining independence and openness in research in areas with a history of conflict has been noted by Dermot Feenan in the very different environment of paramilitary violence in Northern Ireland (2002). Like Feenan, I often revisited the issues of who and what the research I was undertaking was 'for', who funded my work, and which institutions was I working with. I sometimes found that I would be introduced as though I worked for one or another institution familiar to residents. When this occurred, I would treat it as an opportunity to clarify who I was, and where I was coming from, as well as to reflect on why I was being introduced in such a way in that particular setting.

Relationships with participants

I knew when I went to Santa Cruz that one of the most important elements of my fieldwork would be to build and maintain relationships, and when I first arrived, relationships were forthcoming. This enabled me to learn about the place where I lived, about cultural norms and understandings and about the on-going environmental conflict in the area. Participant-friend dynamics and their methodological and ethical implications shape ethnographic practice and the resultant ethnographic material (Twamley, 2014). During fieldwork I was not troubled by the issue, which has previously been addressed by anthropologists, of maintaining a balance between 'stranger' and 'friend', close enough to enable ethnographic learning yet with enough social distance to see society as an anachronism (Everhart, 1977; Powdermaker, 2007). However, while I left the field having developed sincere friendships, I am aware that the development of these relationships was made more difficult by various factors. In these circumstances I was conscious of the ethical difficulties that arose.

My motivations for making friends while in Santa Cruz were mixed, having both a desire for company and a need for the stories and experiences that such friendships could bring about (Twamley, 2014). This feeling was often heightened by the differences between my understandings, and participants' ethical understandings and political leanings (Springwood and King, 2001). As time went on, I learned to accept our differences while also being myself; I voiced my own opinions, with which they disagreed, and we had interesting conversations about these topics. This was part of being 'attentive' in Masschelein's sense of the word, to lack intention, and to try to suspend judgement (2010, p. 48). I learned to live with people who had different, deeply held, ethical values from my own, and they learnt to live with me. They and I put in the emotional work necessary in maintaining this ever-present balance. I think that these elements of awkwardness and discomfort can be productive, when acknowledged in ethnographic research and writing (Hume and Mulcock, 2012).

An element of my relationships with people that became difficult for me to manage

was the distrust that seemed to characterise many relationships there. I quickly began to find that residents would tell me of their distrust of one another, urging me to be wary of others for whatever reason. A new acquaintance would inform me that such and such a person was not to be trusted, mostly because of some event in the past, or because such and such was involved with either the drug traffickers who previously held power in the area, or with the militia. I encountered heightened concern for me and my personal safety, from all parties, who seemed to suggest that I should be permanently aware of, and defensive towards, many of the other people around me. I will concentrate on this in more detail later in this thesis (see Chapter 6). For now, it is important to understand the inherent implications of this for my methodology. The mistrust I encountered had a disorientating effect on me personally, as I felt, at least at the beginning, that I had to continually re-learn and re-negotiate what and who to trust. It had implications for the ways in which my informants did or did not spend time together. I could not, for example, hold extra meetings with Stop TKCSA members in my kitchenette, because an active member would have been excluded due to his explicit distrust of people living around me. Distrust played an important part in the development of my relationships, as I learned to understand and negotiate it.

Approaches

Heterogeneity of experience

The activities I have documented above may appear haphazard or disparate, but they are connected by the threads of a particular place (the loosely termed 'João XXIII' area of Santa Cruz) and the people who lived there. My focus has been on the lived worlds of residents in the vicinity of a particular steel plant, but their lives, like most peoples', were touched by multiple institutions, involve different types of activities with different groups, and may be defined by different relationships at different times. I hope that talking with different people about different things has not resulted in a series of disconnected ethnographies. I hope that listening to different people's stories about their experiences and observing and taking part in new experiences together with them, will not have meant a retreat into perspectivalism; multiplying the perspectives while leaving the issue observed

alone (Mol, 2002). Rather I have tried to look to the 'enactment' of life in the neighbourhood adjacent to the factory, and the 'doing' of the environmental conflict surrounding it by the different parties involved (Mol, 2002). I have tried to acknowledge and understand this heterogeneity of experience within the environmental dispute surrounding the TKCSA.

Events of the 'world of larger systems' (Marcus, 1986, 1995) including the national elections, the collapsing economy, the country's corruption scandals, growing national political uncertainty and the threat of violence also shaped life in Santa Cruz in varying ways. I have paid attention to the ways these heterogeneous issues have variously impinged upon and shaped life in the Conjunto Alvorada, people's thoughts and feelings about them as they developed, and people's practical engagement with them (Biehl, 2013). A common thread of much ethnography of communities experiencing toxic exposure is a particular commitment to illustrating how those exposures, and their effects, are intertwined with social, political and economic elements of life. Michelle Murphy's 'chemical regime of living' expresses this entanglement (2008), as does Melina Packer's critical feminist approach (2021) and Vanessa Agard-Jones' analysis of the entwining forms of life and non-life in the bodily incorporation of synthetic chemicals (2014). While, during my fieldwork, my focus was on the experiences of the residents of the steel plant's neighbouring areas, the aim has been to understand how these experiences are materialised through the discourses, practices and subject positions of residents, campaigners, NGO staff, company representatives, lawyers and medical staff.

Multi-sited ethnography

On a day-to-day basis I was firmly based in the slightly remote neighbourhood of Santa Cruz, and within it, in the also distinctly removed district of the Joao XXIII. However, I have collected fieldnotes in the offices of NGOs, lawyers, and academics, in conference halls, people's front rooms, and in cafes and hotels in the centre of the city. The study of communities affected by contamination lends itself to an approach that embeds the cultural logics of interrelated institutions, such as the state, industry, scientific institutions, legal systems, NGOs etc. within local

worlds, and juxtaposes various sites that constitute the theme of study (Fortun, 2001; Petryna, 2003). Equally, ethnography of corporate social responsibility suits research approaches that span across, and intertwine with, local and global practices (Dolan and Rajak, 2011). While some of my research material was gathered outside the João XXIII area of Santa Cruz, I interpreted that material as supplementary to my observations in my primary field site. In my claims that my work has made use of data from different places, I do not attempt to make a claim for 'holism'; this does not mean there is more of it, it does not make it more detailed or more whole (Strathern, 2004; Cook, Laidlaw and Mair, 2009). I made choices about where to collect data, as a response to fieldwork situations and opportunities that arose, and reflected upon these selections as I went along. I hope to have remained explicit about these selection processes and their implications on the creation of my partial account throughout my writing (Candea, 2007).

'Applied' anthropology and ethics

Participating in the group meetings of Stop TKCSA, and attending the events organised by the group and the NGO '*Instituto Políticas Alternatives para o Cone Sul'* led me to become incrementally more involved in the campaign against the TKCSA. During and after fieldwork I have undertaken a number of activities that some might understand as 'applied', or 'public' anthropological pursuits. I attended meetings of Stop TKCSA not only to observe, but also, later in my time in Santa Cruz, to contribute ideas to the campaign. I discussed local events and NGO policy and practice with staff of PACS and I discussed PACS's work with local campaigners. I attended and filmed protests, on the request of local fishers. I spoke about the issues affecting residents in various forums, such as the meeting between the United Nations Working Group on Business and Human Rights, and 'civil society representatives' in the Working Group's visit to Brazil, and at the Municipal Chamber's seminary about the 'water crisis' in late 2015. I researched ways of testing the contents of settled dust and worked with local residents to collect it from their homes. I monitored the air in my own front yard with the aim of being able to provide that information for the campaign. Since I came back from the field, I have joined shareholder activists at ThyssenKrupp's Annual General

Meetings in Germany and written to UK based newspapers in attempts to bring attention towards this environmental dispute. I have continued to try to highlight the differential access to power among the parties involved in the environmental conflict in Santa Cruz in my thesis and in journal articles.

I did not start my fieldwork with an 'applied', 'public', 'engaged' or 'activist' ethnographic outlook. While these approaches have converged to a great extent (Lamphere, 2004), their collective definition varies and may involve a basic commitment to, working with, or support for informants, social critique in academic and public forums, advocacy or activism (Rylko-Bauer, Singer and Willigen, 2006; Low and Merry, 2011). I do not classify my work as 'applied anthropology', but this is not because of disapproval of the suggested links between application and structures of domination and oppression. The origins and development of anthropology as a whole are inextricably linked to the unequal distribution of power (Asad, 1975; Said, 1989; Rylko-Bauer, Singer and Willigen, 2006). While I do not categorise my work as 'applied', this does not come from an idea that objectivity is a desirable goal for anthropological research (Fortun, 2001). My research cannot be described as 'participatory' or 'collaborative' because I did not negotiate preliminary permission from informants to undertake research in the area, nor did I negotiate the terms of the work, its underlying questions or the outcomes of the project with residents of the areas surrounding the factory (Lassiter, 2005; Johnston, 2010). I would still question who might give such permission, and suggest that while this preliminary negotiation may be a realistic option for anthropologists returning to the field, it is more difficult for PhD researchers that are dependent on funding. Having had to write an application detailing aims and methods before getting any funding from a specific funding stream, somewhat precludes preliminary negotiation with informants, especially for those who cannot afford unfunded, pre-PhD trips to the field.

I chose to conduct research on a 'critical social issue' (Lamphere, 2015), and I certainly felt, and still feel, a commitment to the people with whom I lived. This has been quite central to my work, but I would argue that this was based on a pragmatic

response to ethical reflexivity, rather than on a planned, applied agenda. My involvement in practical activities associated with the residents' campaign was an issue of ethics within the context of relationships that I developed during fieldwork. Whilst I did not directly share in much of the suffering of residents campaigning against the factory, I did observe it, and I felt compelled to contribute what I could to their campaign (Susser, 2010). This is a return to the 'primacy of the ethical' (Scheper-Hughes, 1995) that I do not feel leads me towards a sub-discipline of 'applied' work, rather, for me it is an integral part of ethnography.

The idea of practical doing as a normal part of ethnography seems to me to be a logical extension of reflexive and feminist approaches to ethnography. These shifts in anthropology have acknowledged the central position of the fieldworker and the importance of relationships to the construction of 'facts' coming out of fieldwork (Crapanzano, 1986; Abu-Lughod, 1990; Despret, 2004; Lassiter, 2005). Feminist scholars have highlighted the situatedness of the researcher (Haraway, 1988). A researcher is always situated in the complex constructions of location, history and body. As such witnessing cannot be disengaged from the ethical consequences of positionality (Haraway, 2000; Harding and Norberg, 2005). More active involvement, then, must be seen as a matter of ethics. If the fieldworker is central to what is being studied, the question is not 'whether' to interfere, but rather, in which ways (Mol, 2002; Haraway, 2004b). I have felt attentive, but at ease with this issue, and my actions have been pragmatically developed as specific situations have arisen.

My PhD project received ethical approval from the UCL Research Ethics Committee (Project ID: 5759/001). I also received ethical approval from the Research Ethics Committee of Rio de Janeiro's Municipal Department of Health (Comitê de Ética em Pesquisa/SMS-RJ) for research undertaken within a publicly funded health centre in Santa Cruz.

Timely inquiry

The research and writing that make up this thesis will have taken almost ten years

by its conclusion. I have undertaken this PhD on a part-time basis and have had periods of maternity leave during its completion. This has had methodological implications. Since the period of time I undertook fieldwork, the TKCSA was sold to the Latin American company, Ternium (Ternium, 2017, p. 8). As a result of this sale the availability of documentary information relating to the TKCSA has radically altered as most of the TKCSA's online information has been removed from the Internet. By this point I had already saved and stored many of the company's reports and documents, however, website pages became more difficult to refer to. I tried to access thyssenkrupp-csa.com.br pages through The Internet Archive, to no avail.

My geographical and chronological distance from the time and place of my fieldwork has, perhaps, altered some of my perceptions of the situation in Santa Cruz. With time, some of my relationships with people living around what was the TKCSA have changed and, in some cases, waned; this has impacted on my ability to check information. At the end of the writing process, I also feel more aware of how my presence there only accounted for a short moment in the ongoing development of this conflict. This has made me more conscious of the resilience of campaigners, TKCSA neighbours and the staff of the NGO, Instituto PACS and the longevity of their relationships.

An awareness of the passing of time, since I finished my fieldwork, has also allowed me to incorporate into my writing, some of the changes that have occurred in the environmental conflict in Santa Cruz. On a practical note, the length of time taken to complete this thesis has reinforced the need to be very familiar with my field notes and other data collected at the time of my fieldwork. The time I have spent writing this thesis, and my sense of temporal distance from my fieldwork, reminds me that what I am writing about was a short period of time in the ongoing environmental conflict in Santa Cruz. Fabian argued that anthropologists have tended to deny coevalness by situating study participants in a different time from the 'present' of the ethnographer (1983). As I have become increasingly aware of elapsed time, my consciousness of the partiality of what I write has grown too. I

hope that this has increased my ability to be epistemologically self-conscious and explicit about the holes in this thesis as part of the representational tact of rigorous partiality (Clifford, 1986).

Emotion

I did not write my PhD proposal, or begin fieldwork, with a specific focus on emotions in mind. However, as emotions were revealed to me in the interstices of everyday life, I began to regard them as increasingly important to the environmental conflict that surrounded the TKCSA. The first emotional states that I began to sense, shortly after arriving in Santa Cruz, were mistrust towards others and towards myself, jealousy in intimate relationships, blame for negative things that happened, frustration at the lack of change in the situation regarding the TKCSA, anger about things that the TKCSA had done, curiosity about me as well as feelings of care, affection and friendliness towards me. However, as fieldwork continued, I began to see that these brief labels could not adequately describe what was going on in the Joao XXIII area of Santa Cruz.

Emotions, as part of the environmental dispute with the TKCSA, could not be restricted to the simple labels of 'anger', or 'frustration', or 'mistrust', for example. Instead, I increasingly felt the sway that emotions had on everyday understandings, attitudes, and behaviours. I noticed how those emotions related to the presence of the TKCSA, impacted not only on relationships between the company and those people living around it, but also on family, friendships, and professional relationships. I noted how emotions seemed to shift, how they were often multifaceted and elided simple definition. It is these understandings of emotions that, through the processes of writing and interrogating my fieldnotes, I have hoped to treat with sufficient complexity and subtlety. It is in order to honour this complexity, that I have chosen to structure my work around themes that emerged as part of everyday life during my fieldwork, in order to show how thoroughly embedded emotions were in the world in which they were found. Emotion accumulates through the chapters of this thesis. In the first few chapters, feelings emerge here and there, in amongst other themes. As the thesis progresses,

feelings expand to fill each chapter; leading to the conclusion of this dissertation, which focuses almost entirely on emotions and the ways that they are integral to the experience of pollution and environmental conflict.

Conclusion: Approaches to emotion

In this section I hope to have adequately explained the methods and approaches I have used in my fieldwork as well as some of the challenges that I faced throughout my stay in Santa Cruz. I have outlined some of the relationships which, apart from being important in their own right, facilitated my work. The data collected for this thesis have been gathered through participant observation, and unstructured or semi-structured interviews, with people living near the TKCSA, people involved in the Stop TKCSA campaigning group, members of the NGO Instituto PACS and local fishers. I have also collected data at local 'corporate social responsibility' events held by the company and at the local public clinic in the area where I lived. My work has been further informed by documentary evidence and through my experiences of undertaking some practical action to support the work of Stop TKCSA campaigners.

My work is perhaps slightly different to many other anthropological outputs, in that it has taken almost ten years to complete this thesis. I have made sure to maintain intimate acquaintance with my fieldnotes during this time. Throughout the process of conducting fieldwork and writing, emotions related to the steel factory, and the related environmental conflict, gradually emerged as my focus. This is reflected in the development of the thesis. In the first few chapters feelings arise somewhat sparsely, and they gradually accumulate as the thesis progresses, to fill whole chapters. The main topics of each of the earlier chapters are arguably not immediately focused on emotion, but feelings will out, and they do in each chapter. As the thesis progresses, feelings come to dominate the story.

The following section of this thesis has, as its overall theme, the subject of trust and mistrust through the various lenses provided by a discussion of trafficking, the

'Militia' and extra-monogamous intimate relationships. I then go on to explore mistrust in relation to ThyssenKrupp's steel factory in Santa Cruz.

Section 1. (Mis)trust

Chapter 3. (Re)narration

Introduction

One's feelings about a place and one's place in relation to those feelings alter through time. This has been the case with my relationship to the place where I spent fifteen months during my fieldwork in Rio de Janeiro. I believe that this also accurately describes the relationships that some of the people I met in Santa Cruz had with the place where they lived. During my fieldwork, residents of Santa Cruz remembered things that happened in a way that explained and called into question the present, often with an eye on potential futures. In this chapter I will discuss some of the memories of residents of the areas surrounding the Companhia Siderúrgica do Atlântico. It is important to start with memories, in order to place the experiences, events and processes described in the rest of this thesis within their temporal progression (Fabian, 1983; Gell, 1992). Here, I look at the content of the memories that were expressed to me, which I also refer to as 'stories' and 'narrations', and I also aim to investigate some elements of the process of remembering, telling or narrating those memories. A focus on memory in this chapter is not to say that I remember, or the residents of Santa Cruz remembered, any definitive, totalizing whole truth (Bubandt and Otto, 2010), but that all people create understandings of their past, and anthropologists are no exception.

Here I will discuss two sets of memories. Firstly, I attempt to understand recollections of Santa Cruz before the TKCSA's arrival as an idealised 'garden of Eden'. Secondly, I examine memories of the extreme violence that occurred in the area during the 1990s and early 2000s. I have focused on these two sets of memories because at the beginning of my time in Santa Cruz, they appeared to me to be somewhat contradictory. I was left asking, how can a place be both an idyllic paradise and an area dominated by violent drug traffickers? I attempt to show how these two narrations may fit together. In doing so, I make the suggestion that these memories have a few things in common with each other; they illustrate the

way that understandings of the present can shape recollections of the past, they are both memories *of* emotions, and they themselves contain emotions, or are expressions of emotion.

My discussion of these memories in the João XXIII area of Santa Cruz is aided by anthropological literature focusing memory (Crapanzano, 1991; Berliner, 2005; Blanes, 2011) and the 'invention of tradition' (Hanson, 1989; Keesing, 1989; Linnekin, 1991; Friedman, 1992). The ways people perceive their past, and the political implications of those perceptions, have been much discussed. In this sense this chapter does not add to the theorisation of the politics of memory, rather it documents how particular permutations of memories have developed in this setting. In particular, I look at the uncertainties and potential contradictions contained in these memories and the ways in which the narrations relate to narrators' possible interests and objectives. As part of this discussion it should become clear that the memories discussed here are simultaneously material truth and instrumentalised perspective; they explain and call into question the past and present and point to potential futures. This chapter also provides some introduction for readers to the place where I undertook fieldwork as well as an account of my early experiences to the João XXIII area of Santa Cruz. Finally, this chapter will contribute to the overarching theme of the first section of this thesis: trust and distrust in relationships in Santa Cruz, and the distrust of the TKCSA, by many of its neighbours.

João XXIII as paradise

The residential area neighbouring the TKCSA is at the Western edge of Santa Cruz, which is itself the western-most neighbourhood of Rio de Janeiro. On my arrival in Rio de Janeiro I stayed in the relatively wealthy southern zone of the city while making efforts to find a place to stay in Santa Cruz. After a while there I began to worry that I may not manage to locate a place to live in Santa Cruz. The connections I had hoped to find between people in the Southern Zone of Rio de Janeiro and Santa Cruz did not seem to be easy to come by. In fact, the majority of people I talked to in the South Zone of the city, about where I was going to be

living, warned me vociferously against living there[9]. I contacted an academic who I knew had been active with the campaign against the TKCSA and she contacted her friends in Santa Cruz, on my behalf. These friends of hers had also been involved in the Stop TKCSA campaign, and were able to find for me, a kitchenette in a road that was very near the factory. After visiting to view the kitchenette, a week later I returned with my large bag to set up temporary home.
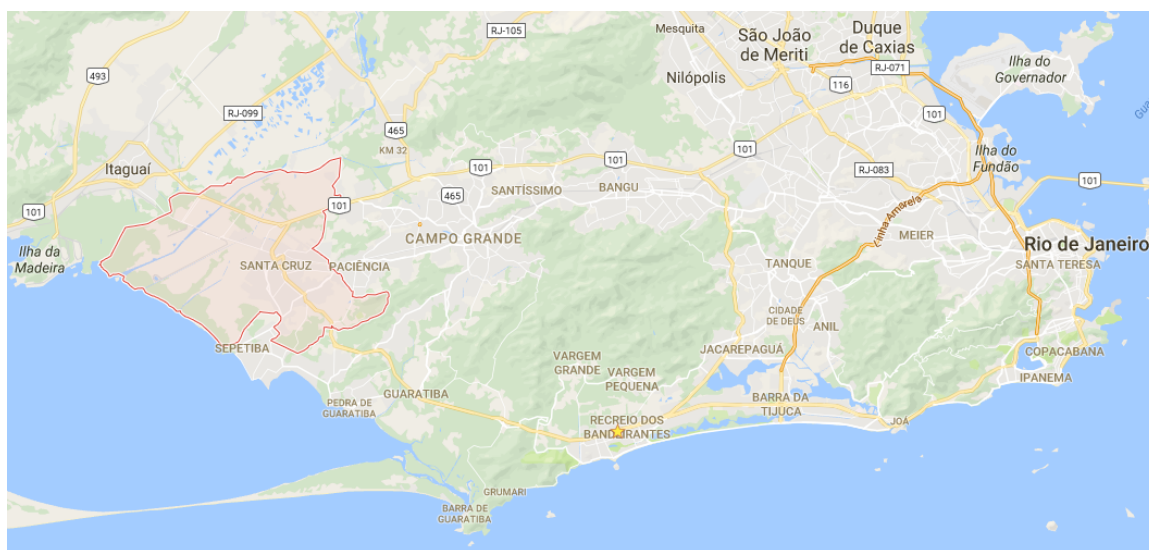
Figure 1. Map of Rio de Janeiro, showing Santa Cruz at its western edge

The journey from central Rio de Janeiro by public transport could take up to three hours and included a van ride[10] which could last around fifty minutes[11] from the train station in Santa Cruz, along the João XXIII Avenue. While I was in the João XXIII area I often came across a sense of detachment from the rest of the city. It was not uncommon to hear people who live in the João XXIII area talking of things going on in the centre of Rio de Janeiro as 'down there in the city' (*'lá em baixo na cidade'*) as if their neighbourhood didn't form part of the city. Similarly, some people in the João XXIII sub-neighbourhood of Santa Cruz spoke of the centre of Santa

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[9] See Arias (2006) and Muggah & Souza Mulli (2012) for interesting, if brief, discussions of warnings from middle class Cariocas to foreigners, with regards to supposedly 'off-limits' or 'no-go' areas of Rio de Janeiro.

[10] The main form of public transport, once in Santa Cruz, was the 'van' which was normally a twelve seat minibus staffed by two (normally) men. One drove the vehicle and the other collected the money, shouted out for custom, told the driver when to stop to pick up passengers and helped passengers on board. In some areas of Rio de Janeiro the system of vans is controlled by militias. In the João XXIII area of Santa Cruz I do not know if the vans were militia controlled.

[11] This journey time was mainly due to heavy traffic.

Cruz as 'there outside' ('*lá fora*') or talked of 'going to Santa Cruz' ('*vai para Santa Cruz*'), as if they lived removed from it. On my first journey from the train station to the João XXIII area, and on most subsequent journeys, I remember a gradual change in atmosphere. While central Santa Cruz often bustled with traffic, pedestrians, barbeque stalls and shops, the João XXIII area gave a markedly calmer initial impression. The roadsides were less built-up, there were fewer shops and people, the pace of the place appeared to slow somewhat and despite heading into the so-called 'industrial zone', the area appeared to become more residential.

The TKCSA factory is located between the João XXIII Avenue at the North, the sea to its South, a river to the West (known as the *Canal São Francisco*) and another smaller man-made canal to the east. The area I refer to as the 'João XXIII' is made up of the João XXIII Avenue and various sub-neighbourhoods stemming from the avenue's northern side. These sub-neighbourhoods are quite different from one another, having been constructed in different periods, by different institutions or individuals, and for different reasons. While these areas do not form a unified and coherent geographical unit, they are the areas where I spent most time during my fieldwork, they are the nearest residential areas to the factory, and it was normal for people living in any one of those sub-neighbourhoods to also frequent others.

Figure 2. Map of western area of Santa Cruz

Within days of my arrival, I had attended my first group meeting of those individuals campaigning against the TKCSA and had organised a few interviews with members of the group. In these first meetings group members offered understandings of their pasts, and their neighbourhood's past, in some insistent detail. At the time they appeared to argue that, in a loosely or variously defined time before the TKCSA was installed in Santa Cruz, the João XXIII area had been a 'natural paradise'. The air had been 'fresh' and eucalyptus infused and the wind brought in the smell of the sea. The area where the factory stood had been richly green and home to all sorts of animals and birds. Crocodiles, capybaras, snakes and mosquitoes had lived there without the need to venture into local residential areas. Local people could freely wander onto what are now the factory grounds to hunt. Fruits and vegetables grew abundantly and healthily. The mud of the Sepetiba Bay attracted visitors because of its health-giving properties. A large stretch of mangrove forest bordered the sea. The water was clean, the fish were plentiful, and children were free to jump into, and swim in, the Canal São Francisco.

In an interview with a member of the Pare TKCSA group, Senhor Iago, we discussed this verdant image of Santa Cruz as he talked of his childhood in the area.

"It was an allotment here, of agricultural land for people to plant. And they planted everything here. This area was the green belt of Santa Cruz. So I come from that epoch of Santa Cruz, when I was a child. In Sepetiba there was a beach that was considered, like, a beach of the 'interior'[12] ne? Sepetiba was a beach that was considered to be medicinal. The mud was used as a remedy, rubbed on the skin, just like girls use creams, or soap. Madams from Copacabana would come here to apply this mud. Today, this makes me sad, because today it is venom. And the bay had a type of sardine here, there were billions and billions. There were also sea bass. People used to kill 30 or 40 kilos of fish. Today one doesn't even get 5 or 6 kilos. It is rare to get more, sabe? So

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[12] The 'interior' usually means the 'interior' of the country, or the countryside often away from the sea. However it can also be used, as it is here, to mean 'undeveloped' 'rural area', or as 'the provinces' as opposed to major cities of the area.

this sometimes makes me sad and I get nervous. I go to the meetings, and I meet with the politicians and I see them talk rubbish, and I get nervous. Because there used to be a lot of fish, a lot of vegetables, a lot of things. In Itaguaí, for example, in that sierra, it was full of fruit farming. A lot of papaya, understand? So here it was a paradise. And now we are here, with this business of the children dying, children with allergies, they are getting cancer, heart problems are appearing… "

Here Senhor Iago switched back and forth between the paradise of the past and the pollution of the present, the abundance of the past and the current scarcity, the healthy environment of the past and the presence of contemporary health problems. As was also common, when talking about the changes between a past characterised by paradise, and later environmental degradation, he punctuated his account with his feelings of 'nervousness' and 'sadness'.

Dona Julia, who was an active member of Pare TKCSA and who rapidly became a dear friend of mine, also remembered Santa Cruz as a green and pleasant place. In our first interview she talked about the time when the TKCSA was first was being built. She said,

"Soon lots of snakes and lizards started to appear near our house. And crocodiles, we have two there in the Guandu (a sub-neighbourhood to the north of the João XXIII Avenue)... All that came out of the CSA, they all escaped. Parrots too. I used to go there (to the area where the TKCSA is currently located) to pick up some manure to put on my plants, and you used to see baby parrots. The older parrots were fetching food for the little ones, and the little ones used to make a noise. There were a lot of birds, really a lot. And the CSA finished with all of that… Before, it was only the João XXIII and a few houses, just a few. On the other side of the avenue it was just agricultural land, owned by the Japanese. There were plantations and plantations. And where the Conjunto São Fernando is (a sub-neighbourhood to the north of the João XXIII Avenue) there was a plantation of squash, maize, cassava, sweet potato and cabbage. And not long ago the Conjunto Alvorada (another sub-neighbourhood to the north of the main avenue) was a Eucalyptus plantation. The smell was so

good. Now, there are still some of those trees here, but you can't smell them anymore, the pollution is so strong. But it used to be a garden of Eden."

The paradise-like nature of Santa Cruz must have co-existed with some urban expansion. It is unclear when exactly the area at the western edge of Santa Cruz began to lose its rural character, but historian Cavalcanti has noted, "In 1920 it (Santa Cruz) was already very urbanized and its territory was 128,234,420 KM2 - the fifth largest district of the municipality, behind Campo Grande and Jacarepaguá: There were 2,411 buildings and a population of 16,506 individuals" (2003, p. 52). Cavalcanti's work is mostly focused on the centre of Santa Cruz rather than its western reaches. Similarly, while Dona Julia remembered the Eucalyptus plantation as 'not long ago', the Conjunto Alvorada sub-neighbourhood was built as housing for the workers of the Brazilian Mint, which opened in 1984 (Casa da Moeda do Brasil, 2015).

Likewise, the clear picture of paradise before the TKCSA, and pollution after the TKCSA, is complicated by the expansion of industry in the area over the last sixty years. Though now closed, the CIA Mercantil and Industial Ingá produced zinc nearby since the early 1960s (CETEM, 2012), as part of an industrial project which ended in a major pollution incident for which company directors were later charged (Ministério Público Federal, 2005). Similarly, the Furnas power plant has been in operation there in various guises since 1967 (FURNAS, 2007) and Gerdau's Cosigua mill opened in the early 1970s (Camisasca and Neves, 2013). In these same interviews, Senhor Iago and Dona Julia traced some of the history of the development of the 'industrial zone' of Santa Cruz. In further discussions with both Senhor Iago and Dona Julia, they mentioned other issues that complicated the notion of a paradisiacal past, speaking of economic difficulties in their past for example. However, both accounts highlight and crystallise the importance of the installation of the TKCSA factory to their narrators.

None of these facts directly contradict the claims that the area 'used to be', and is no longer, a green and fertile area. These claims were backed up by numerous

other personal stories about the area, and by official reports (Porto et al., 2011a; Kato and Quintela, 2012; Dias, Búrigo, de Castro, et al., 2014). In this sense I do not negate the 'authenticity' of these narrations (Linnekin, 1991). Instead, I seek to pay attention to the ways in which the emphases of these accounts are responsive to contemporary experiences. The bucolic idyll of Santa Cruz was recalled as part of understandings of Thyssenrupp's Companhia Siderúrgica do Atlântico, which was viewed as causing the loss of a paradise.

I also note the difficulties in pinning down these memories. In both of these speakers' stories, the teller spans back and forth across undefined amounts of time. They selectively bring together temporally disparate and geographically specific elements of local history. As David Gilbourne has reflected, "*a life story, is not something that is easily accessible, not something that is neat and linear, but is maybe best understood as a collation of fractured narratives and cross-referenced plot lines that permeate different times (youth and middle age for example) and different contexts also (such as school, work and home)*" (2011, p. 28). Biographical narrative as methodology has been the focus of much criticism. Perhaps most famously Bourdieu argued biography can be methodologically dangerous when presented as a uni-linear trajectory of coherent progression. He rejected the utility of biography due to its unreliable subjectivity (Bourdieu, 2000). Here, I argue that biographical narrations are messy presentations of temporally unstable stories. What you hear in a person's autobiographical narration may not be what they focus on when re-narrating at another moment or for a different audience. Autobiographical narratives may leave time and place unclear; they are not totally anchored in geographical coordinates or historical dates. Even when autobiography is briefly, fleetingly attached to something more concrete, it may switch away from it, to leave the audience with a sense of uncertain history.

It is notable that feelings are clearly depicted through these memories. Senhor Iago and Dona Julia illustrated feelings associated with loss; sorrow at what had gone, nostalgia for a place that no longer existed, anger at the way this loss had occurred, and frustration at the ways it was discussed by politicians. The insistence that the

loss of this type of bucolic scene in Santa Cruz was related to the TKCSA gives us the notion that their loss is of the possibility of solace in their present, or in that moment in time. These narratives fit neatly into Glenn Albrecht's definition of Solastalgia:

"*the pain or distress caused by the lived experience of ongoing loss of solace and the sense of desolation connected to the present state of one's home and territory*" (2020, p. 10-11).

The very beautiful evocation of the kinship and care of the birds, the smell of the air, the abundance of produce, the health-giving properties of mud, all give the sense of a place that was uncontaminated, fresh, growing, and alive; perhaps a place that provided solace. These descriptions were a call to witness this loss and the mourning and distress at that loss. The process of recounting these stories expressed too, the frustratingly repetitive need for these narrators to re-narrate what was lost. Finally, the act of narrating also encapsulated a sense of gentle satisfaction that they were, at least, able to do their part in documenting these losses.

João XXIII and trafficking

The memories recounted above, of an idyllic 'garden of Eden' became more surprising to me in the context of other memories that I heard narrated regarding the recent history of trafficking-based violence in Santa Cruz. While there is no necessary contradiction between fertile greenery and the violence of traffickers, the latter initially seemed to me to be out of place in the bucolic scenes evoked in some memories. In the 1980s and 90s in Rio de Janeiro, drug trafficking gangs increased the spread of their geographical control exponentially, and the numbers of violent deaths and injuries increased with it (Zaluar, 2000; Dowdney, 2003; Zaluar and Conceição, 2007; Zaluar and Christovam, 2013). By the early 2000s Santa Cruz was one of the areas with the highest homicide rate in Rio de Janeiro (Rivero, 2010). A number of friends and interviewees in Santa Cruz emphasised the difficulties associated with living with drug trafficking gangs. My friend Ana informed me that during the time when drug trafficking gangs controlled the João XXIII area,

various different groups were at the helm at different times, and in different sub-neighbourhoods. Territorial control of the area was divided between the three main rival gangs, the *Comando Vermelho* (Red Command), the *Terceiro Comando* (Third Command) and the *Amigos dos Amigos* (Friends of Friends) (Muggah and Mulli, 2012) throughout the 90s and early 2000s. During this time outbreaks of violence occurred.

My friend Isabelle had somewhat hazy but evocative memories of drug trafficking-related violence. One day, over our usual weak beers in one of the outside seating areas of a roadside foldaway bar, she moved onto the subject because we had been talking about her schooling. When Isabelle was at school, the sub-neighbourhoods of the João XXIII were controlled by rival gangs. She explained,

"Here we had one lot (one trafficking gang)*. There on the João XXIII Avenue, where I studied, there was another. So, when they were at war, no one could go from here to there. And as I studied there, I ended up missing classes, until they would let the students from here, enter into their area, ne? It was very complicated. We were threatened a lot; we had to leave school with a load of people who lived here to be able to go home. There was a lot of fighting, a lot of fighting."*

The disruption of normality, through forcing schools and shops to close and preventing free access across territorial lines has been well documented (Zaluar, 2000; Penglase, 2005). I was told that, for years, this kind of disruption happened regularly in the João XXIII area.

Other issues people mentioned were the gang-members' ability to walk into residents' houses freely and store drugs or guns there, young boys being drawn away from school to work at the selling point (or the '*boca de fumo*') (Zaluar, 2000), and young girls being 'chosen' by traffickers to enter into 'relationships' with them. Memories of trafficking are very occasionally complicated by admission of some of the more positive aspects of local trafficking control, especially in contrast with the militia control that succeeded it, or with other trafficking controlled areas. In the same conversation with Isabelle, she also said, "Its like this, the guys from the boca

here (the place where drugs were sold), they were friends. The good thing about them was that. It isn't the same if you go into a favela these days. If you go into the favelas 'Antares' or 'Rola', if you go in they will ask you where you're from, what you're doing and what you've done. Here they didn't do that. The guys from the boca were ok, entendeu? They only messed with whoever was doing things that were very wrong."

There was one memory that a few people seemed to have, and independently recounted to me on separate occasions. They referred to the dead body of a boy that had been displayed for everyone to see. One friend recalled the image of the boy, skin stripped off his body, hanging from a 'tower'. Another friend had told me the boy had threatened a local girl. My friend told me that she was present in a crowd of people looking up at the body as it swayed with a message around the boy's neck. I have a recording of one account about the boy from an interview with a neighbour. These were his words:

"He (the boy who was later killed and strung up from a tower) went up to a girl and said, 'today you're going to have sex with me', and if she didn't he would beat her up. He beat her and raped her. He died in a very ugly way. They cut him up. They cut him all up. He got involved but his father wasn't involved. He advised his son to stop, but he continued. So he died in the way that he died. He was going to rape a girl so he died all cut up. They hung up his body there, on that electricity tower there. They cut him from top to bottom. And there were no consequences. They cut him all over. They put a piece of paper on his body, and on it they had written, 'this one won't rape anyone anymore' because he had raped a woman. Trafficking did that."

The various accounts of that brutal scene differed slightly, and could even refer to different cases that I, or they, have rolled into one. These particular memories were narrated at different times, by different people and in different contexts. I don't know if all the narrators were there to see this dead boy directly, if they formed part of a viewing crowd, if they knew the boy personally, or if their memories of the scene have been reinforced or altered by other people's subsequent narrations. The

different versions of the story of the dead boy's suspended body remain out-of-focus for me as I remember, and read in my fieldnotes, what others selectively narrated to me, from their own partial memories. What is left for me, a 'rememberer' of the memories of others, are images that give the impression of having been altered many times; they are faltering and uncertain and above all, they are incomplete. The details of exactly what happened in the scene remembered are not necessarily important to focus on; they are superfluous. Their lack of clarity does not take away from the significance of the memory. The materiality of what happened in this memory is not diminished by the patchiness or variability of its description either by myself, or by the people whose memories I have retold.

Once again, the clarity that can be found in these memories rested in their emotional strength, which showed the depth of shock at such events. Even though events such as these may have occurred more than once, they were never assimilated into understandings of what was, or should be, normal. Here it is important to say a word or two about shock. Anthropologists have focused on 'culture shock' (Nolan, 1990; Irwin, 2007) as a methodological insight. Tim Allen has critiqued anthropology that sets aside analysis of violence, in favour of a journalistic emphasis on how horrific it was (Allen, 1989). However, despite insistent searching I have found little in the way of anthropological literature about the desire, or the utility and need for narrators to shock their listeners. One of the uniting features of these different narrations of the dead boy's suspended body is that they were told as part of an attempt by the teller to illustrate how awful it was during the time of trafficking. Not only this, but I could sense each narrator's pointed search for my reaction; this was a delicate search for my shock, my understanding of such horror, and my empathy. It was horror they had gone through, and survived, and I had not. Through these narrations, they highlighted the depth of moral breakdown that had occurred during the time of trafficking, and they did the emotional labour of pointing out their own recognition of it.

There is another element to this story that is important to pick out. My neighbour's narration of the potential consequences of somehow 'getting involved' with

trafficking is part of a discourse of moral reasoning that goes like this. Firstly, if you 'get involved' you may get hurt, secondly if you get hurt it may be because you 'got involved', finally, and as a result of this reasoning, the argument is put forward that one shouldn't 'get involved'. This is a theme that also occurred throughout my discussions about trafficking-based violence with people in Santa Cruz. It is a theme which borders on fault, and which suggests an ideal state of isolation. If one can isolate oneself from being 'involved', and thereby prevent oneself from being at fault, one may avoid harm. There is a logic of lethal reciprocity within this discourse. Harm is the result of fault, which is a result of involvement. Avoiding involvement can be difficult; how should one avoid being involved when drugs and guns are being hidden in one's house, for example? Perhaps the answer to this is to attempt to practice extreme vigilance in one's day-to-day interactions with others and to approach social relationships with a sense of the imperative to avoid getting involved with potentially dangerous activities. This logic illustrates the emotional repercussions of having experienced such violence. The emotions emerging here were the fear that comes with having lived in such proximity to violence, the sense of personal responsibility to avoid harm, sorrow for those who were caught in harm's way, as well as a slither of occasional disdain for those who were entangled in such violence because of their own actions. Since the traffickers were violently forced out of this area of Santa Cruz there is still an emphasis on avoiding involvement (see Chapters 4 and 6). In order to do this, one has to know *who* not to get involved with, *what* not to get involved with and *how* not to get involved. I will discuss this further in the concluding chapter of this section (Chapter 6).

Contradictory memories?

I have touched on methodological and representational issues that are involved in understanding the memories discussed above. Here I want to stretch these arguments further. Anthropological investigations of memory are prolific, perhaps even broadening the concept so far as to make it indecipherable from 'culture' (Berliner, 2005). It is the continual renegotiation of memories through the process of remembering, that is relevant here. This too is not a new subject amongst social theorists. I argue, in line with anthropologists who discussed the symbolic

construction of the past in the present (Linnekin, 1983; Handler, 1984; Friedman, 1992), that autobiographical narration is interpretative of the past, in part, as a function of the circumstances at the time of narration. My interest here is not to delve into the finer details of the relationships between sociocultural continuity and discontinuity (Handler, 1984), between tradition and modernity (Lindstrom, 1982), or between convention and invention of culture (Wagner, 1981). Instead, I focus on the ways in which different groups of people in the João XXIII area of Santa Cruz emphasise different elements of their memories in line with their political approaches to more contemporary circumstances. Now, as it did for anthropologists of the 1980s and 90s, the question of 'authenticity' arises as an issue in this argument (Linnekin, 1991). This was particularly important for anthropologists who at the time were dealing with politically sensitive issues such as indigenous traditions (Hanson, 1989) or nationalist discourses (Handler, 1984). In Santa Cruz the socio-political approaches towards a local history of trafficking violence and the TKCSA, as well as the interpersonal politics of relationships, can be seen in narrations of memories in the João XXIII area. It is in this sense that I intend to show that it is possible, and necessary to walk a tightrope between the material truth of memory and the instrumentalised perspectives illustrated in narration.

De Certeau et al. also argued that memory is subject to external circumstances, alterable and unstable; they are a function of the time of their narration and of the ways they are retrieved each time they are retold (1980). Crapanzano wrote that representations of memory are often narrowed down and solidified into a single authoritative narrative (1991). I have suggested, in my description of each of the narrations I have examined, that memories are unstable, selective and carry hints of their own transformations. It is here that we get on to the issue of memory as a function of the time of narration. It is important to illustrate some of the specific influences (at least those that I was able to understand during my time in Santa Cruz) behind the ways that these memories were presented. In an examination of the unstable and heterogeneous biographical accounts of the Tokoist Church's Angolan prophet, Ruy Llera Blanes illustrates how multiple strategies of

biographical configuration reflect interpretations of the present in the context of disputes between rival Tokoist groups (2011). I would like to argue that a similar phenomenon is occurring in the João XXIII area of Santa Cruz, and I go on to pick out some of the ways in which this can be understood.

Narratives will vary according to their narrators; narrators have different interests, so their narrations may have different emphases. In retrospect I have come to think that what I took as the initial insistence on the paradise of the past, was, in part, a reflection of Stop TKCSA group members' normal interactions with Brazilian journalists, lawyers and politicians who sometimes briefly visited. During my time in the João XXIII area, I observed many such visits and once the news companies had finished their interviews, the lawyers had met with local campaigners or politicians had heard the fishermen's complaints, they left and I was often surprised at how little feedback was given. While the NGO staff members from PACS often kept campaigners up to date with developments, the lawyers, politicians or journalists seemed not to supply regular information about outputs. Group members who had spent their time relaying their grievances were rarely able to tell me about the results of those discussions. In this context the repeated jumping between bucolic past and polluted present served a practical purpose. Residents appeared to make the rational decision to impart the most important parts of their accounts, the parts that most effectively invoked the seriousness of the impacts of pollution, the starkness of the changes the company's presence had brought on the area and the emotional depth that accompanied those changes. It was in the context of the dispute surrounding the TKCSA that campaigners wanted to be sure I was aware of precisely what the steel factory had destroyed. Within the Stop TKCSA campaign there was such apparent desire for change, and frustration at the lack of it, that it seemed that, while I was there, group members wanted to make the most of my visit as a conduit for information to reach someone, anyone, the 'public' and the 'people that mattered'. My guess is that, perhaps with reason, campaigners were caught between their difficulty trusting people coming from outside with the aim of 'doing good', and their need to publicise and highlight the

injustice they felt at the radical changes that had accompanied the installation of the steel factory.

Narrative emphasis on trafficking violence is a reflection of residents' lived experience of the decades of the 1990s and early 2000s; these narratives were expressions of the extremity of the violence in the area. They were explanations for why one shouldn't 'get involved' even at the time of narration, and they served as reasoning behind the vigilance involved in social relationships. I also interpreted these memories as attempts to bring me into that lived experience, to provoke my understanding and empathy and to position the narrator in relation to that violence. I have mentioned the disparate temporal and spatial foci of the narrations of a paradisiacal past, and this argument can be extended to include the narratives of trafficking violence. Images of the João XXIII as a predominantly natural space may overlap with those memories of the period of trafficking-based control in the region, however, it is likely that the latter refer to a history that is slightly more recent. The narrators of João XXIII as a trafficking-controlled area were generally younger, and the years of drug related violence dominated a greater proportion of their lives. I think that their narrations also mediated our relationships, with narrators able to express an element of their identities as people appalled by trafficking violence, as people that could be differentiated from such violence, thereby presenting themselves as sensible and reasonable people who had not got involved. In turn I fulfilled my role of expressing shock at trafficking violence, and my naivety to such horror was confirmed. In listening to these autobiographical accounts, it is important to consider what the narrative is understood to be for, whom it is recounted to and what the relationship between narrator and listener is.

Conclusion: Integrated memories

The ways in which these memories are interpreted also illustrate some important political considerations. It is imperative to locate these memories at the point of careful balance between instruments of a motivated teller and accounts of material facts. My approach may appear slightly suspicious of memory; it is not suspicion that motivates my enquiries, but a belief that the people I spoke with, and I, were

mutual allies in the creation and recreation of selectively partial memories. This does not undermine the validity of the memories discussed above, it does not mean that they are materially untrue or inauthentic. Selective (re)narration is, after all, what I undertake when writing a thesis. I argue that my interlocutors cut up their memories to suit particular needs, uses and emphases. In doing so these narratives have illustrated approaches to ThyssenKrupp's factory, to a relatively recent history of trafficking-based violence and to interpersonal relationships, including those with myself.

There is an emotional component to these narratives which is worth highlighting. Sara Ahmed has said that, "memory can be of a feeling; a memory can be a feeling. In remembering, we make the past present; we make present" (2021, p. 14). Here, Ahmed discussed the ways that traumatic events retold can bring trauma into the present, in ways that call for someone to bear witness. I have focused on the ways in which the past is brought about in different ways depending on the time of narration and on the audience. However, the situations described, and the depth of the changes that those living in Santa Cruz lived through, were extreme. I felt that these two different sets of memories seemed to share a call to bear witness.

In this call to bear witness, both narrations held within them an emotional strength. The Stop TKCSA narrators and those who told me of trafficking-related violence both provided memories that were *of* feeling, and memories that *were* feelings. Dona Julia and Senhor Iago were suffering from a sense of loss of their garden of Eden. In some ways their memories were *of* feelings; they give, for example, a sense of past pleasure and solace found in their previously idyllic home area and nature and the frustration at the ways it had been destroyed. These emotions aligned well with Albrecht's notion of Solastalgia (2020). However, in some ways their memories also encapsulated feelings in and of themselves. The very telling of their bucolic stories brought out the frustration at the need to keep re-telling their past (to what end?), as well as a sense of satisfaction that they were able to take action in some small way, by attempting to make someone else understand their loss. The Stop TKCSA campaigners wanted me to witness the extremity of their

situation, perhaps after they had, time and again, seen little change in their situations, after their efforts to inform 'outsiders'. Finally, as Koury has established in his work on the neighbourhood of Varadouro in the city of João Pessoa, Paraíba in Brazil, memories of place, and the emotions that are associated with them, can consolidate a sense of belonging and social connection in an area (2010). Dona Julia's and Senhor Iago's narratives were an element of their connections with other campaigners, and of their ongoing involvement in the Stop TKCSA campaign.

Similarly, younger informants' memories of trafficking-based violence were also memories *of* feelings, such as the horror, fear and shock at the violence they witnessed. Their re-narrations were drenched with emotion. There was the emotional pull to invite understanding of the extremity of the situation they had lived through as well as a sense of recoiling at those experiences. There was the feeling of seeking empathy and a search for connection with the emotions that I might display. Lastly, there was sometimes a hint of a sense of achievement that they had survived. These were all feelings that needed to be witnessed.

It was in the feeling of resignation and the expectation of abandonment by visiting journalists, lawyers, and anthropologists, as well as in the fear of getting involved that the first evidence of mistrust became clear to me. Some of these issues will be further fleshed out in the following chapters, and finally in the concluding chapter of this section. In the next chapter I continue to explore aspects of the security situation in Santa Cruz, at the time I undertook fieldwork in the area. I make some suggestions about the impacts of Militia presence in the João XXIII region of Santa Cruz on the ability to trust, and I examine some of the implications of Militia activities in the area, for the strength of the campaign against the TKCSA.

Chapter 4. (In)security

Introduction

In many ways, the areas of Santa Cruz where I worked are what one might expect of peri-urban, semi-industrial, low-income neighbourhoods at the edge of Rio de Janeiro. Perhaps the most immediate impressions of the area are of the seemingly haphazardly designed but painstakingly constructed houses, dusty roads, thin rivers flanked by colourful fishing boats and the large-scale industrial buildings and looming electricity pylons. Before arriving in the area I had some idea about what it was like, and I expected, as most anthropologists must, that I would have to learn about the place as I went along. Prior to beginning my fieldwork, I had read about public security in the area and had formed initial understandings about the presence of a 'militia' in Santa Cruz. In my research into the militia in Santa Cruz I learned that a local fisherman had received death threats from the militia for his involvement in protesting against the TKCSA and had been moved to a secret location for his own protection (Markov, 2009). Unsurprisingly, on arrival in Santa Cruz, the presence of the militia was not immediately visible, and it was only after I had become more accustomed to my new location and had begun to get to know people around where I lived, that I began to notice the presence of the relatively open secret of the 'militia'.

In this chapter I discuss some of the impacts of militia presence in Santa Cruz. The militia was part of everyday life in Santa Cruz. It had an effect on what people could and could not do, provided some household utilities, and allowed or disallowed small businesses to function. The militia also effected what people could and could not talk about, the ways these things could be discussed and, ultimately, some of the ways that people felt. This chapter makes the argument that an accurate depiction of public security in Santa Cruz must reflect the mutual interdependence, the similarity of aims and practices, and the sometimes contiguous membership, of the police, traffickers, and the militia. Along the way, though, we note the feelings that emerge as part of the (in)security in Santa Cruz. In this chapter I observe the feeling of being potentially unsafe, the stress or discontent generated by having to

change plans as a result of traffickers', police or militia actions, the worry that comes with the unknown, the feelings of disdain that sometimes arose towards police and militia members, feelings of care and concern for newcomers such as myself, and the difficulties in trusting that were implied by the closeness between ordinariness and violence in militia members. Finally, this chapter goes some way to illustrating the direct impacts of militia presence on the ways that the disputes surrounding the TKCSA developed, and provides context for further discussions about the environmental conflict.

Militias

In the West Zone of Rio de Janeiro, militias are groups primarily made up of police officers and retired police, security guards, firemen and prison guards (Cano and Duarte, 2012; Hinz and Vinuto, 2022). In the literature, militia groups are understood to present themselves as an alternative to drug gangs, establishing themselves in areas previously controlled by drug trafficking groups, in the absence of state law enforcement (Barcellos and Zaluar, 2014). At the time I was in Santa Cruz, militia groups were thought to be territorially organised (Silva, Fernandes and Braga, 2008) armed groups that charged fees to local businesses and residents, ostensibly for protection (Zaluar and Conceição, 2007). They also often charged for the illegal provision of goods and services such as cable television, internet, electricity, water, transport, bottled gas and real estate (Zaluar and Conceição, 2007; Barcellos and Zaluar, 2014). While militias often shared these characteristics, the different groups also functioned in different ways throughout the city (Zaluar and Conceição, 2007).

The history of Rio de Janeiro's extra-judicial vigilante groups is somewhat controversial (Silva, Fernandes and Braga, 2008; Chaves, 2010). Rio de Janeiro's militias are variably traced back to the 'Special Inquiry Group' (*'Grupo de Diligências Especiais'*) which was set up in the 1950s, the extermination groups which began functioning in the 1970s in the Baixada Fluminense, or the *'Polícia Mineira'*, a group that is thought have emerged in the favela 'Rio das Pedras' in the 1970s, and which specialised in assassinating 'criminals' and selling protection to

residents (Burgos, 2002; Cano, 2008; Misse, 2011). The trajectory of the development of different militias in different geographic areas of the city has varied considerably (Zaluar and Conceição, 2007). Militias have gained more public and media attention since 2008 when journalists were abducted and tortured by a militia group (Araujo and Petti, 2022). Since then, previously sympathetic understandings of the militia as a 'lesser evil', in comparison to drug trafficking organisations, have hardened in recognition of the extremities of militia violence (Pope, 2023).

There is some dispute about whether the term 'militia' accurately defines the phenomenon. Cano has argued that the use of the word semantically presents these groups as either neutral or positive forces fighting against an external threat (Cano, 2008; Chaves, 2010). NGOs and academics employ other names and descriptions, including '*matadores*' ('killers'), '*grupos de extermínio*' ('extermination groups'), '*grupos paramilitares*' (paramilitary groups), '*grupos parapoliciais*' (para-policing groups) or the term *'grupo armado irregular'* (irregular armed group) has also been used (Amnesty International, 2007; Alves, 2008; da Costa, 2014). However, '*milícia*' was the word most commonly used during my time in the Conjunto Alvorada to describe these groups, and members were called '*milicianos*', so these are the terms I use here. I also remain loyal to informants' occasional representations of them as '*quebradores'* (breakers) and *'matadores'* (killers). It would be difficult to understand much of the goings on in the area where I lived without examining some of the specificities of the phenomenon of violence in the area (Velho, 2012), and in Santa Cruz some of that phenomenon is constituted by local militia activities.

Living with *milicianos*

During the first year of my stay in Santa Cruz, I had seen repeated evidence of militia presence, but only after some time did the militia begin to have a more imposing presence in my life there. From my own research and from conversations with middle class Cariocas living in the South Zone of Rio de Janeiro, or with middle class activists and NGO members, I had come to understand 'the militia' as a wholly negative phenomenon. However, when speaking with some of the people I lived

with, there was a sense of ambiguity when the militia was discussed. For example, my first introduction to the theme was on a December evening sitting on the pavement with neighbours. When it was hot, the people I lived with, their family and friends, often came out onto the street to sit on the pavement's edge and talk. That night I was wearing a belt bag around my neck and shoulder and my friend Ana-Paula saw me, laughed and said, "the militia wear the same type of bag, and they wear it the same kind of way, around their neck and shoulder". Still laughing, she asked if I knew who the militia are. I answered that I wasn't entirely sure, and I asked her to explain it to me. She described them like this:

"do you know what 'trafficking' is?"

"Yes, I think so, do you mean the trafficking of drugs?"

"so, where there is militia, there is no trafficking."

I asked, "ok, so, do people like them then? The militia?"

"Some people do, and some don't. I don't have anything against them, but they can also be bad". She finished this conversation with pursed lips, shaking her upright index finger from side to side. While this non-committal statement was not a glowing review of the militia, at the time I was a little surprised that her condemnation had not been, at least slightly more unequivocal. Of course, this could have been because she felt that she couldn't be more negative in public, but her wording also hinted at something I would like to examine here. I suspect that her statement that 'they can *also* be bad' meant that, on the one hand, the militia could be 'bad' as well as sometimes having some positive effects, and on the other hand, that the militia did 'bad' things, just like others who came before them, or others who might replace them.

During the first few months of my time in Santa Cruz, the militia had often been mentioned in hushed whispers, and I had heard the occasional story recounted. It became clearer that contravening a militia's 'norms' could lead to problems with the militia. A friend explained that 'problems' with the militia could lead an individual to disappear. She expanded on some of the gory details with conspiratorially wide eyes while her mouth shaped her words into a whisper. Such an individual, I was told, could be taken by milicianos to a property in a neighbouring area, where they

would be killed, cut up, and their bodies disposed of. A few weeks later I experienced the first of a few similar conversations in which concerns were whispered over coffee, that someone was 'going to have problems' with the militia. On this occasion the conjecture was that the family living nearby had been warned that their son should not return to the area as it was thought he had been stealing. The type of 'problems' it was thought this young boy could face, were left unspoken.

The 'Militia Bar'

There was a bar near to where I lived, and I used to go there with friends, to drink beer and play pool before heading out to a local Funk music dance. The bar, like most bars in the area, consisted of an area of poured concrete covered by plastic awnings, a pool table, some stackable plastic chairs and a small wooden hut with a window hatch which formed the bar. We would spend evenings there drinking the slightly watery beer, 'Antartica' from litre bottles, sharing it around our white plastic cups. Whenever my friend's beer warmed in her cup, she would turn away from the table, pour out the remaining warm beer and refill from our shared beer bottle. It soon became clear to me that some other friends and people I knew in the area were already aware that I was spending time at this particular bar. As I walked in the direction of my house one day, I passed by this bar. Someone I knew ran up to me and said, while pointing with their thumb at their own chest, and through their own body, "you know you shouldn't go to that bar Delia, it is the local bar for milicianos". I asked, "what does that mean?". The person accompanying me frowned and said that they were dangerous people and I should just avoid the bar as much as possible. At this point their stern expression and pursed lips gave me the distinct impression that this is something I should just accept and not ask any more questions. In that instance, I thought back to the slightly overweight middle-aged men sitting at the bar and tried to think which of them might be able to do the things that I had read the militia did.

On another occasion, I was with my friend Maria, showing her some pictures she had asked to see, and she caught sight of my photos of the militia bar, which I had taken while it was empty and closed during the daytime. Maria put her hand on

mine and looked me in the eyes with a serious expression. She said, "you shouldn't take pictures of the militia bar Delia. Did anyone see you?". I answered that I thought that no one had seen me take those pictures. Her response was chillingly serious, "you know that they are cruel people Delia. They will kill you laughing, they'll kill you laughing". While I was a bit surprised by the insistence on the seriousness of the issue (it was just a photo after all, I, perhaps naively, thought) I promised that I would never take another photo of the militia bar again. Once again, I wondered which regulars at the bar could find it in themselves to threaten, abduct, torture or kill people. This question occurred to me from then on, while I was having polite conversations with bar regulars, while one man told me about his wife's cancer, or another expressed an interest in what bars were like in London, I occasionally imagined them hacking through limbs or disposing of a body. These images in my mind's eye only became more pronounced when people occasionally pointed out the places where they had seen a discarded body part.

Many have looked into the apparent contradiction between, on the one hand the people who ordinarily seem to live in somewhat unremarkable ways, and on the other, their extreme acts of violence. Perhaps most famously Hannah Arendt pointed out, in her description of the trial of Adolf Eichmann, that, "the trouble with Eichmann was precisely that so many were like him, and that the many were neither perverted nor sadistic, that they were, and still are, terribly and terrifyingly normal" (Arendt, 1994, p. 276). Hannah Arendt produced a controversial (Clarke, 1980; Berkowitz, 1999) report on the trial of German Nazi leader Adolf Eichmann in which she claimed that Eichmann's role in the Holocaust was not based on intention or motive, but rather on a thoughtless carrying out of orders (1994). While she did not directly define 'banality of evil' she suggested that it was primarily the unthinking but dutiful following of orders as part of the bureaucracy of 'administrative massacres' (Arendt, 1994). Of course, in the case of the milicianos, I am unable to discuss whether, as Arendt confirmed in relation to Eichmann, they conducted 'unthinking' acts of violence based on the orders from superiors (Arendt, 1994, p. 287), because there was no way for me to study the internal structure of the group, or its members' motivations. It is the theme here that was also referred

to by Primo Levi that most interests me. Levi has stated that Nazi guards were not monsters, rather they were people, "like you and I" acting in accordance with their environment (Levi, Belpoliti and Gordon, 2001, p. 270). It is the idea of living with this capacity within individuals that I find interesting in the context of this area of Santa Cruz. It is the knowledge that people who may otherwise be considered 'normal', may also undertake extreme violence, that I point to as potentially impacting on the ability of residents of the João XXIII area to build and maintain relationships of trust.

My experience of the presence and impact of the militia was, it seemed, markedly different from the experiences of those people I knew in the area. This was, in part, because the potential consequences of contact with the militia were possibly very different for me as a foreign anthropologist. However, at the very least my experience varied from that of others in the sense that people who had lived locally, long-term were able to identify local members of the militia. I was aware that most people knew who was a miliciano, while I was left with an unsettling feeling that almost any adult man that I spoke with could be a militia member. I believe that this type of consistent and suspicious doubt was particular to recent arrivals and foreign anthropologists. However, while others may not have been dealing with the same problems of identification, the understanding that someone who is otherwise so innocuous could also be extremely violent is, perhaps, more likely to have been common to us all. It seems pertinent to ask what the effects of this experience may be in the ways in which one is able to relate to others. What, if anything, does this do to everyday lives and relationships? And what effects might this have on a campaign against large-scale industry in the area? Throughout this section on trust, we will examine some of the ways in which people living in the João XXIII accommodated memories of violence and the possible threat of violence. I will argue that this is an integral part of a more generalised mistrust (see Chapter 6).

Violence and rumours

It was in September of the year I spent in Santa Cruz that the militia presence in the area became yet more imposing. One midday in the middle of the week I took

a walk with my friend Clara and her young daughter through the Conjunto Alvorada. We aimed to reach her parents' house in the adjoining neighbourhood of São Fernando where we were going to have coffee and a chat with her mother. As we reached the point at which the Conjunto Alvorada turns into São Fernando we were warned to turn back and head home because of gunfire between the militia and the police. We met a friend of mine who said that she thought that, "the militia killed a '*Civil*' (member of the Civil Police) down in São Fernando and the police are looking for militia members. I would go home if I were you, it isn't safe down there. All the schools have been advised to close, and the kids are being sent home". We thanked her, turned around and headed home. On our way home I got a call from my friend Fernanda, who asked me to collect her child from the crèche while she was at work because the crèche was sending children home. Fernanda worked long hours and when she came to mine to collect her child she bustled in and out quickly, stopping only to thank me profusely and complain that she had enough on her plate without having to make impromptu childcare arrangements.

Later that day I was out with friends Gabriela and Sara. It was a quiet evening, there was no-one else around, and we sat down on the curb for a chat. Sara told me that the militia had called a curfew, and no one was allowed outside after 9 o clock at night. She said, "Delia, don't go out at night. It is dangerous, for now. Until they manage to get the people they want". A What's App message had been going around about the day's events and she played it to me. It said,

> "Hey irmão, they came and messed with the neighbourhood, no? So now we're going to fuck Paciencia (an area next to Santa Cruz). We are going to avenge our deaths here, irmão. Wherever there are people, we are going to shoot up this shit (vamos metralhar essa porra). We are going to kill innocent people and those who aren't innocent too, whoever is there in front of us. At the door of the Guanabara (a supermarket in Santa Cruz). You wait, you wait. We are going to see who is controlling this place, you wait. This isn't a joke, we are going to get revenge for ours. I don't want anyone in the bars, on the road or smoking marijuana in the street, getting drugged up… Jesuitas, Barbante, Campo

Grande, Santa Cruz, wherever… We won't allow school classes… Death for everyone, innocent people are going die…"

At the end of the recording Gabriela commented while shaking her head, "they are all criminals". They continued, "it is gossip too though. This is only What's App. With What's App I can record something here and send it off with my mobile phone, and it will end up in your mobile, and you can send it to another person, you see? It is the same as with Facebook. With Facebook you can post a photo and more than thirty million people see it, understand? That's how it is, but the milicianos must have done some kind of shit to be hunted by the Civil Police".

"They told me that it was the militia that killed a policeman?" I asked. They responded that this was true.

Sara interjected, "This is a war of militia against militia. Militia with militia, and police too". She repeated that I mustn't break the curfew and go outside after nine o clock.

I asked, "and the criminals put out messages on What's App?

"They do Delia, they let everyone know"

"And do the milicianos do the same?"

Gabriela's answer was that, "the milicianos don't do shit for anyone. It is only the criminals who let people know. But they are all criminals and sons of bitches. And they are all police too. It isn't criminals, like she is saying. It is all police. Delia, it is 'police'. You have to say 'police', not 'militia'. It is police that we have here. One police fighting against another. One police force that doesn't know any better than the other". At that moment some dogs began to yap at each other outside, and our attention was drawn towards them. It felt like a moment of reprieve from the tension and I sighed at what felt like the weight of my own inability to understand this unclear, potential danger.

The next day a friend told me that a militia boss had been killed, and his wife was now hiding out in São Fernando. A few days later another friend explained that he had heard that the recording on What's App had been a fake, but that the fighting had erupted between militia groups based in two different neighbouring areas. In these conversations during this curfew in Santa Cruz, it is clear that people weren't sure about the details of the situation in which they found themselves. On the one

hand they had received warnings which could have come from a criminal faction, on the other hand there were stories that militia members had killed members of the civil police, or that two different militia groups were fighting. There was a marked absence of more official explanatory information, on the television for example. In this context people living in the Conjunto Alvorada relied on rumours in their efforts to understand what was happening.

Rumours are stories, whose storytellers think are true (White, 2008); they are unsubstantiated reports of behaviour that often allocate responsibility (White, 1994). Gluckman has famously interpreted gossip as a privilege extended only to individuals when they are accepted as a member of a particular group (Gluckman, 1963; White, 1994). Other classic studies have noted the connections between rumours and violence. Rumour has been seen as a mobiliser of action (Rudé, 1956), as a reflection of fear and distrust of authorities (Stewart and Strathern, 2004) and as a means of naturalising divisions between social groups (Das, 1998). Arias has noted the importance, and potentially untrustworthiness, of rumours occurring after events in favelas in Rio de Janeiro, stating that they illustrate the relational and dialogic processes of lived political realities (2006). In the Conjunto Alvorada these rumours emerged at a time of crisis and uncertainty (Strathern and Stewart, 2005) and rumours were part of the specificities of violence in this area. When there was the possibility of violence not directly controlled by the State, but potentially involving police, and / or extra-judicial vigilante groups, rumour could provide a way of understanding what is going on, in the context of a lack of information from official sources.

Of course, in these contexts rumour had many roles. Rumour had the potential to clarify these kinds of situation for residents, to provide knowledge that could keep them safe, it could also increase the impact of what might otherwise be thought of as small-scale violence and could be conspicuously deployed as a means of social control. Lastly, these rumours were not easily verified; the explanations of this outbreak of violence showed that previous events that were rumoured to have happened became building blocks upon which to create understandings of this

violent episode (Stewart and Strathern, 2004). Zapata and Romero, writing about understandings of violence in Tumaco, Colombia, argued that rumours relating to violence could produce a sense of uncertainty, panic and fear; emotions or affects which maintained particular types of social control (2019). Similarly, the residents I knew tried to work out what was going on, and even when they feared the information they were receiving could be false, they attempted to grapple with the possibility of its truth. Perhaps the main point to draw out here is that rumours left the possibility for doubt and uncertainty. People I spoke with acknowledged that some of their information was based on 'gossip', thereby appearing unsure as to what exactly was happening. A lack of certainty about the details of violence (who is perpetrating violence, where, why and towards whom?) may contribute towards mistrust. Trust can be difficult to find when one doesn't know who exactly is involved, what is actually going on, and which are the ways in which the situation could potentially affect you.

Maria had expressed alarm at my risky photography, and other friends had let slip some exasperation with me while telling me not to visit the militia bar. During the episode of violence that occurred in Santa Cruz described above, Fernanda had seemed to feel a touch stressed and annoyed at having had to change her plans for the day, when she was already busy. Friends who warned me not to go out at night while these events were ongoing showed such an energy or impetus of concern that it seemed I should take them seriously and understand the potential consequences. Gabriela illustrated a forceful sentiment of disdain for police and the militia, and one could sense in her voice, a form of resignation: she was already accustomed to this kind of problem and knew how to navigate it. Perhaps the most impactful feeling provoked by this episode was the reminder of one's fragility and vulnerability; that the norms, routines, and freedoms of a peaceful life could be so swiftly diminished. This is a feeling that I can only infer from what I was told and the way these things were expressed, since I did not have the forethought to ask more directly about it. However, I interpret its presence underlying some of the frustration, stress and the care extended to me as a relative newcomer.

Militias, traffickers, and police

The other thing to notice here is how the three groups, traffickers, police and militia, are closely intertwined in some residents' understandings. Da Costa has analysed the denomination of 'militia' as a discursive occurrence and an ideological mechanism (2014). She argued that the terms 'police' and 'militia' are sometimes used interchangeably because residents of militia-controlled areas witness single individuals representing both a domination that is violent and imposed, and a form of domination that represents authority and legitimate power (da Costa, 2014). She argues that the 'confusion' over the term reflects the tensions between what is understood to be legal and what seen as illegal. Militias, she says, commit crimes anchored by a discourse of confronting criminality and they offer violence as protection (da Costa, 2014). I argue that if our understanding of this tension is broadened to include traffickers and the police, we can see why the confluence of the police and the militia provides a very accurate image of public security in Santa Cruz.

The place of the police in Rio de Janeiro, vis-à-vis the State, has been, and continues to be, difficult to pinpoint. Some have emphasised the connections between militia groups and the police (Comissão Parlamentar de Inquérito, 2008; Funari, 2022; Pope, 2023). It seemed, from the perspectives of my interlocuters, that the Police were considered to be both analogous and contiguous with traffickers and with militias. Rio de Janeiro's police forces include the 'Military Police of Rio de Janeiro State' (PMERJ), itself subdivided into different policing areas as well as its 'Police Special Operations Battalion' (BOPE) and 'Pacifying Police Unit' (UPP), and the 'Civil Police of Rio de Janeiro State'. It is the Military Police that are responsible for maintaining public order, while the Civil Police carry out investigations (Kinosian, 2013). Luiz Eduardo Soares has argued that there has long been a generalised perception that the police are not under the control of the government of the state of Rio de Janeiro (1996). He claimed that seminal events in the early 1990s crystallised this impression, including the police massacre of homeless children in Candelária in the city centre in 1993, and the

police killings of residents of Vigário Geral in the same year (Soares, 1996; Penglase, 2011).

There is also evidence to suggest that some police also cooperate with traffickers; an example of this can be seen in the police collections of taxes from traffickers, and the assassinations resulting from some traffickers' refusal to pay (Human Rights Watch, 2016b). Cases in which Military Police have been found to receive profits from drug trafficking, or have been found directly selling drugs and weapons, have been heavily publicised in the media (Coelho, 2016; Corrêa, 2016). The Military Police in Rio de Janeiro have been found to be the most corrupt of all police forces in Brazil. Statistics from the year before I moved to Santa Cruz show Rio de Janeiro's force carried out the highest number of cases of extortion involving the Military Police in the country (Senasp, 2013). Various ethnographies of favelas and low-income communities in Rio de Janeiro have illustrated that not only are police and trafficker conduct intricately intertwined, but residents of these areas are aware of these links (Zaluar, 1994; Arias, 2006). Drug trafficking and the criminal and lethal activities that trafficking entails are also the business of policing in some areas of Rio de Janeiro.

Police activities also closely replicated militia activities. Police corruption has been made very visible over the last few decades, through investigations into bribery and extortion rackets. In 2014 senior police officers in West Rio de Janeiro were found to have demanded payments from business owners and private transport companies, as a protection from prosecution over illegal activity. Perhaps most importantly, Human Rights Watch found that one fifth of all homicides in Rio de Janeiro in 2015 were police killings and that more than 8,000 people were killed by police between 2006 and 2015 (Human Rights Watch, 2016a). Some police killings have occurred in shootouts with traffickers, but some are thought to have been summary executions often involving police cover-ups (Human Rights Watch, 2016b). Private payments for protection, summary executions and a lack of recourse to judicial process have not been the preserve of militia-controlled areas. Not only have the militia and police forces played a part in a reciprocal system of

protection and clientelism (Pope, 2023), they have also been, to a certain extent, made up of some of the same people (Comissão Parlamentar de Inquérito, 2008). It is thought that members of the police and retired police officers have formed part of the make-up of militias, at all levels (Comissão Parlamentar de Inquérito, 2008). It seems that the dynamics of police and organized crime activities in Rio de Janeiro cannot be analysed in isolation from each other (Funari, 2022).

One conversation I had with another friend confirmed that this was the way she too viewed the police, the militia, and the drug traffickers in Rio de Janeiro. As she made coffee for us one day there was a piece of news on her wall-mounted flat-screen television. It was about police operations inside the Mare (a 'favela' in Rio de Janeiro). My friend said, "they are killing many policemen there in the favela, in the Mare. Many many police". I replied that I had thought that since some police operations in the Mare there hadn't been much trouble there anymore. She gave an incredulous laugh and exclaimed in a derisive voice, "so what! The police are connected to the drugs. You think that when they find the drugs, they burn them? No! They pretend to burn them, but they go to another favela and they sell them! They could stop all of that if they wanted to, but no, they are all connected." Our talk about the 'police' continued, until it became clear that conversation had moved seamlessly onto the subject of the militia involvement with the murder of a young mother in the area. This young woman was thought to have left her child alone in the house at night with a lighted candle, while she had gone out to a bar, drinking, smoking marijuana and meeting men. My friend said this girl must have been crazy because her house caught on fire and her child died. The rumour was that the 'police' had been looking for her and she had fled fearing reprisals. She ended her story by saying that this young woman had recently returned, thinking that the risk to her life had diminished. Soon after her return she was shot in the head.

I also witnessed an event that I believe showed that while the personnel involved in the 'militia' and the 'police' may not have been completely homologous, and their objectives may not have been totally aligned, the two groups were certainly characterised by very close links and similar aims. The outdoor funk dances, which

often occurred in a square just three streets away from my house were often associated with the governing militia in the area. Towards the end of my stay in Santa Cruz I was told that the militia had organised a larger outdoor funk dance to occur on the nearby football field. I was not very happy about this as I knew it would be very loud, and even if I attended, I would not be able to escape the noise once home. However, some of the people on my street were talking about hiring one of the booths, that I was told would be set up at one end of the field, for those who perhaps didn't want to stand and dance all evening. I began to consider going. Vans started to arrive on our road, packed with metal fencing to put around the fencing that already surrounded the field. This fencing was then covered with wooden boarding and cardboard signs. It was clear that something was going to happen soon.

As we neared the assigned date for the dance, excitement about it escalated, and people began to prepare to put money together to hire a table. About three days before the event, about four cars of armed police arrived in the area. A number of police officers stood outside their cars, armed with imposing guns. They stayed there for days, in a move that was unprecedented during my fieldwork. I kept clear of them as much as possible, trying to avoid walking past them. When I asked others what the police were doing installed over a period of days in the Conjunto, the answer was that there had been a disagreement between the 'police' and the 'militia'. It was thought that the normal fee given to the police, by the militia, to allow the dances to go ahead, had not been considered sufficient by the police this time. The police had installed themselves around the football field to ensure that the militia did not continue their preparations for the dance, and that the dance did not occur. Friends and neighbours exclaimed their annoyance at this unusual course of events. Some of them insisted that it was greed that led the police to demand more money. Of course, we cannot know for sure that this dance was originally planned by the militia, or what the reasons behind the police presence were. However, this alleged break in harmonious relations points towards the routine nature of cooperation between the police and the militia. The reactions of many local people showed that they perceived that the two groups, at the very least,

normally work together, and that such a disturbance of the normally mutually productive relationship between them was unusual.

There are similarities between the militias, trafficking groups and the police in Rio de Janeiro; they are all groups who dominate territories, using both legal and illegal means to establish and govern norms of behaviour under the threat of violence. This is important for many reasons, however I am interested in these similarities because of their impacts on trust in the area where I worked. From the explanation that the militia are *"cruel people, Delia. They will kill you laughing",* one might interpret that the militia, in particular, deserve not to be trusted. However, in Gabriela's argument that, *"they are all criminals and sons of bitches. And they are all police too"* we can see that, according to her, it is not only the militia that shouldn't be trusted; it is also the police and, perhaps more obviously, criminal groups of traffickers.

Conclusion: The militia and 'Pare TKCSA'

The militia have also had more direct impacts on the campaign against the TKCSA in the João XXIII region of Santa Cruz. While talking in whispers, or amongst friends did not normally attract attention, involvement in group protest, meetings and talking to reporters could (Milanez, 2014). It has been reported that the militia were involved in the security of the construction of the TKCSA (Kato and Quintela, 2012) and I was told that a few fishers had had to leave the area, during the construction of the factory, following threats from the militia. One anti-TKCSA protester had been relocated for his own safety after receiving threats from the militia (Markov, 2009; Porto et al., 2011). Since then, militia members have been reported to have intimidated residents at public meetings regarding the TKCSA (Pedlowski, 2014). A researcher working on issues associated with the presence of the TKCSA in Santa Cruz told me about one of the public meetings,

"In this meeting, the leaders of the movement told us, 'look, there are people from the militia observing you here.' After the meeting we were scared to walk to the train station, you know? It was like, not knowing exactly what their level of sophistication was, or what the limits were of where they would go with this

intimidation, including, would they be violent, like more direct violence, more physical? We were worried about this for a while"

In many of the various interviews I undertook with people involved with NGOs and public health institutions, the presence of the militia was identified as an important reason behind the diminished numbers of residents involved in protest against the company. I was often reminded that there used to be hundreds of residents involved in meetings, and that the fall in numbers was partly a result of militia intimidation.

Only in the last meeting of Stop TKCSA members that I went to, did I discover an ongoing dispute regarding the militia between residents involved in the group. These monthly meetings were held in a hired hall on the main avenue that runs along the northern edge of the factory. Its battered wooden doors opened onto a large bright room with a white tiled floor and orange walls flanked by wall-mounted fans. There were plastic tables and stackable chairs set out in the middle of the room for us to settle into. I had arrived late to this Saturday meeting, but most of the others had arrived even later, so there were only three of us in the large room. I sat down and the two residents already present were talking about another member who had left the group. I knew who they were talking about because I had been introduced to him before, in another setting. I was told that this man had been active in the campaign against the TKCSA, but that he had left the movement. In the meeting one of the attendees, was upset while he went through the story, which he began to tell me when I sat down. He rubbed his red eyes as he told me that he and this man (let us call him Geraldo) had almost come to blows one day because they had different approaches to their respective threats from the militia. In the end, it was this issue between these two men that had both ruined their friendship and marked the end of Geraldo's involvement with Stop TKCSA. Whether or not the presence of the militia had had an effect on the numbers of residents involved in the movement, it is clear that the atmosphere of distrust, and the severity of potential consequences, had had an effect on some of the relationships within Stop TKCSA, and on the ways in which local residents felt able to campaign against the company.

In this chapter we have seen the general stress and annoyance presented when faced with logistical issues provoked by potential militia clashes. We have noted the uncertainty surrounding rumours and the ways that this can lead to fear and mistrust. I have described the care taken to ensure that I, an outsider, should take heed of warnings. There was, also, disdain and resignation in the voices of those explaining the outbreak of violence in Santa Cruz, I have recounted the sense that everyday life could be so vulnerable to violence as well as the ways that the threat of violence impacted on campaigners' behaviour and relationships. In the next chapter I go on to discuss trust and distrust in the context of intimate and sexual relationships in the João XXIII area of Santa Cruz.

Chapter 5. (In)fidelity

Introduction

Distrust can be seen in various relational dynamics. One of the ways in which trust and distrust emerge is through jealousy in intimate and romantic relationships. It has been suggested that an inverse relationship exists between dyadic trust in relationships and jealousy. Individuals who report higher levels of jealousy, also present with lower levels of relational trust (Dainton and Aylor, 2001; Kemer, Bulgan and Çetinkaya Yıldız, 2016). The question of trust in the home, and in close relationships, will become important in relation to understanding wider dynamics of mistrust in Santa Cruz, and I go on to explore this theme in Chapter 6. Thus, a discussion of relational distrust and jealousy provides additional context for understanding a wider atmosphere of mistrust in the area and contributes towards an understanding of the mistrust displayed more generally in the João XXIII and the distrust of the TKCSA.

Perhaps one of the first times the issue of distrust and jealousy in intimate partnerships came up in conversation during my fieldwork, was with my friend Alexa. I had met Alexa at an exhibition of photos that highlighted the pollution of the TKCSA. I had been surprised to see someone so young involved in the campaign against the company, which is typically populated by older residents of the area. When I asked her if she often came to these organised events she told me how close her house was to the factory, and shrugged her shoulders, as though this made it obvious that she would of course campaign against the company. I went to Alexa's house for dinner with her and her husband Gilberto. During dinner they asked me if I missed my partner (they used the word '*namorado*' meaning 'boyfriend'). As we discussed how it felt to live apart from one's long-term partner, their questions turned to the topic of jealousy (*ciúmes*). Alexa asked if I ever worried about what my partner might be doing in London, or if he would be tempted to cheat on me. In this conversation Alexa used three different terms; *enganar* meaning 'to

deceive', *chifrar* which comes from the Portuguese word for animal horns[13] and *traição* meaning 'betrayal'. I explained that this was not one of my concerns and they both appeared to be interested in this. They asked why I wasn't concerned about it and suggested that this was unusual in local intimate relationships. During our dinner, Alexa went on to warn me about the issue of 'betrayal' of relationships and its implications. She particularly wanted me to be aware that I should be wary of women thinking that I was a potential threat to their relationships. She said, "*You should watch out Delia, because they will come up to you too. Haven't you seen any women fighting? It's always about something to do with a man. Women here are very jealous (ciumentas). And they can really get physical too*".

In the João XXIII area of Santa Cruz, jealousy was a common reaction to the idea of possible 'infidelity' in intimate relationships, amongst both men and women, and people reported that it was often accompanied by feelings of anger, incredulity, resentment, and a more general suffering. It is an investigation of understandings of 'infidelity', the different ways in which its emotional consequences can play a part in intimate relationships, and the ways that these feelings can reverberate in friendships and families, that interest me here. It is in the wider context of the dynamics of trust that I will be analysing these issues in the concluding chapter of this section (Chapter 6). Intimate relationships are just one of the many spheres of social life in which the issue of trust emerged during my time in Santa Cruz and attempts to understand the emotional impacts of jealousy in intimate relationships can contribute towards an understanding of the dynamics of interpersonal trust. Trust, in turn, plays an important part in the ways in which the TKCSA is seen to engage with its neighbours and local campaigners' understandings of the TKCSA in the on-going environmental conflict.

Extra-monogamous intimate relationships

'Infidelity' in sexual relationships in Brazil has been the subject of some anthropological discussion (Duarte, 1987; Fonseca, 2001; Hautzinger, 2007;

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[13] The symbolic representation of cuckoldry through animal horns in Brazil and elsewhere has been discussed in work by Fonseca (2001) and Brandes (1981).

Shapiro, 2011). In this literature there are many issues at stake. How does 'adultery' fit in to moral frameworks of love and family (Hautzinger, 2007; Mayblin, 2011; Shapiro, 2011)? How do gender relations play out in extra-marital affairs and understandings of them (Duarte, 1987; McCallum, 1999; Fonseca, 2001; Mayblin, 2011)? The social sciences have presented Brazil's 'low-income communities', or the 'urban working classes', as socially 'traditional' (Duarte, 1987; Sarti, 1994, 1996). Does concern about adulterous sexual relationships make the people of the João XXIII area of Santa Cruz 'traditional' or does the perceived prevalence of the practice make them 'modern' or is male infidelity part of a 'traditional' understanding of marriage (Medeiros, 2014)? Is it considered morally transgressive to have multiple simultaneous sexual relationships (Shapiro, 2015)? In Santa Cruz I gradually learned of a number of situations in which my friends' relationships were affected by 'infidelity' or the idea of it. I am, therefore, interested in these questions in as far as they contribute to an understanding of the consequences that 'adultery' can have in Santa Cruz for friendships, family, or intimate relationships.

This topic is difficult to discuss without unintentionally implying moral judgement. One could refer to these practices as 'extra-marital affairs' or 'adultery' except that many of the people I knew in Santa Cruz made little distinction, if any, between a 'marriage' and a stable, long-term, live-in, heterosexual relationship (Fonseca, 2001). One could discuss 'infidelity' or 'unfaithfulness' in sexual relationships, except that these words suggest a sense of disapproval. I have chosen to use the slightly long-winded terms of 'extra-monogamous intimate relationships', 'extra-monogamous sex' and 'multiple concurrent / simultaneous sexual relationships' to describe, as literally as possible, the undertaking of sexual or intimate relationships aside from what is thought of as one pre-established sexual or intimate relationship, often without the full consent from all actors involved. This is because, as I will argue, in this area of Santa Cruz, social tensions often stemmed from an understood threat to what was thought to be the 'primary', pre-established and stable relationship. Normative understandings of established intimate sexual relationships in Santa Cruz generally involved an implicit understanding of agreed monogamy, often with associated material and financial commitments, even

though many people in this area believed that monogamy could be difficult to achieve.

Recent anthropological studies of intimate relationships in Brazil include Matan Shapiro's study in Maranhão, Northeast Brazil. In contrast to Shapiro's assertions about intimate relationships in Maranhão, in Santa Cruz while concurrent intimate relationships may have been mutually exclusive and meaningfully intimate (Shapiro, 2015) to the person involved in both (or all) of them, they were not necessarily considered as such by the person(s) involved in only one of those relationships. Shapiro suggests that the 'problem' with multiple intimate relationships occurs, not through their multiplicity, but through their revelation. The 'cuckold', he argues, can successfully continue his relationship even while suspecting adultery, because couples make their sexual infidelity invisible (Shapiro, 2016). The maintenance of invisibility, he argues, is actually an ethical practice in committed relationships. I find various problems with this argument when attempting to apply it to the people I got to know in Santa Cruz, and I will go on to discuss these issues as a starting point for a discussion of extra-monogamous sexual relationships and their impacts on friends, family and intimate partners, in the João XXIII area of Santa Cruz.

Firstly, while I understand the impetus to question the assumption that monogamy is the most functional way of maintaining a relationship, I would argue that on my interlocutors' own terms there was a shared but implicit, normative idea that relationships should be monogamous. The language used to describe extra-monogamous sexual relationships amongst the people I knew in Santa Cruz mostly had negative undertones (betrayal, deception and the most commonly used term, '*chifrar*' or '*botar chifres*'). These negative undertones were made yet more evident in the secrecy behind multiple sexual relationships, and the concomitant lack of mutual consent.

Secondly, Shapiro measures negative consequences of multiple sexual relationships based on whether the relationship has broken down. I argue that there

are various emotional responses to extra-monogamous intimate relationships, in a context where monogamy is understood as the norm, and these can take place whether or not the 'primary' relationship continues. Shapiro's explanation of adultery as an ethically managed behaviour, negotiates the paradox of intimacy as constructed through both moral commitment and the ever-increasing proliferation of intimate relationships (Shapiro, 2011, 2015, 2016). However, in doing so it obscures some of the variety of emotional responses to, and material consequences of, breaking the norm of monogamy. A brief explanation of some of the situations I encountered, involving sexual relationships and attitudes towards them, will give an idea of this multiplicity of understandings. Finally, and crucially, in the João XXIII region of Santa Cruz, the consequences relating to multiple simultaneous sexual relationships resulted from the *potentiality* of extra-monogamous sexual relationships, even when no 'infidelity' had occurred. For some, emotional consequences sometimes arose based only on a suspicion that extra-monogamous intimacy was happening or could possibly occur in the future.

Seeking simultaneous sexual relationships

In the area of Santa Cruz where I lived, people often expressed the understanding that both men and women will have multiple concurrent sexual relationships. This is something that has been noted in various low-income Brazilian contexts (Duarte, 1987; McCallum, 1999; Fonseca, 2001; Shapiro, 2016). During my time in Santa Cruz I had a friend called Antonio who I spent some time with, often chatting over a beer. He invited me to his family home and I got to know his wife and children. It had never occurred to me that this friendship could be complicated by intimate attraction. However, one evening I was having a drink with my friend Joana and her boyfriend Tomás, and Antonio happened upon us and joined us for a while. When Antonio left to go home Joana and Tomás told me that Antonio wanted a sexual relationship with me. I laughed and dismissed their concerns, saying that our relationship was just a friendship. Tomás burst out laughing and repeated "friendship" and let out a 'ch' noise, of disapproval.

Joana said, "No Delia, you have to be careful with him, he definitely wants something more". I answered, "'He knows that I am in a relationship though, he must know that I am not interested in that sort of relationship with him".

Joana replied, waving her finger slowly from one side to another in a gesture that I often saw her make, "No Delia. That doesn't matter, men here don't care about that. They don't care if you have another relationship, and they don't care if they have another relationship. You just have to be careful with them." I went on to avoid being alone with Antonio, preferring to see him in situations involving his family. What is interesting here is the possibility of a shared idea that many men in the area were looking to have sexual relationships with multiple partners, as well as the idea that this might constitute a reason to 'be careful'.

This idea of men commonly seeking sex with more than one partner can be coupled with an understanding of women as potentially sexually motivated beings. The term 'piranha', literally the name of a species of omnivorous fish with sharp teeth and strong jaws, was frequently applied to women thought to be undertaking multiple sexual relationships, or considered to be sexually promiscuous (Duarte, 1987; Fonseca, 2001). The word was regularly thrown about in jest, often generating little response other than laughs and a nod from the woman in question, which I sometimes took as a note of defiance against moral disapproval. In conversations with my closest women friends in the area, and her friends, I repeatedly noted that jokes and general discussion often showed that they enjoyed sex, that they sought sex with multiple partners, that they had sex with men they were not planning on seeing again and that they had sexual relationships with men they wanted nothing more from. Both men and women were commonly viewed as seekers of multiple concurrent sexual relationships, and in some cases they were.

Of course, this is not at all problematic in and of itself. However, difficulties occurred when this idea clashed with a shared understanding that monogamous relationships were ideal, and to be protected. By way of introduction to this theme I delve into the realm of Facebook. Image macros (a type of internet meme in which a picture is superimposed with text) (Marwick, 2013) were often posted on

Facebook that expressed the idea that men were frequently, and secretly, seeking sexual contact aside from a 'primary' intimate relationship. The image below, for example, shows a 'single Cinderella' innocently brushing her hair. It says, "My ex's current girlfriend walks by me and laughs. If I showed her the pictures and messages he sends me on What's App, would she still have that smile on her face?".
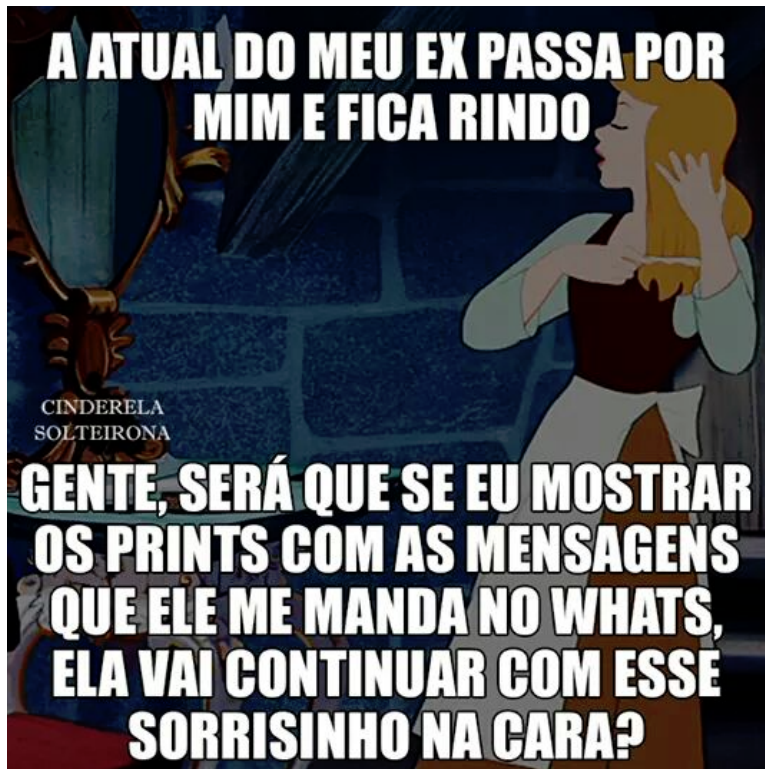
Figure 3. 'Single Cinderella'

Image macros often involve humour (Knobel and Lankshear, 2007; El Khachab, 2016). This is a meaningful joke that suggests a particular emotional response to extra-monogamous intimate relationships. The person who posted this image macro revelled in the idea that the new girlfriend does not have what it is presumed she wants: monogamous commitment from her boyfriend. It reminds us that this new girlfriend perhaps shouldn't feel comfortable enough in her relationship to feel superior (or to pass by the ex-girlfriend with a grin on their face). It depicts a flicker of potential resentment between women involved (albeit consecutively) with the same man. Both its content and its translation into an image macro indicate that, at least among some, there is a shared ideal of monogamous commitment, even if

it is challenging to achieve. The consequences of breaking this shared norm were varied and a discussion of them will show that there was a common understanding that relationships *should be* monogamous.

Consequential variety

Some revelations of extra-monogamous relationships had explosive results. I was told that the man who lived near us (let us call him Paco) had suddenly disappeared one day 'abducting' his small child to a local trafficking-controlled area, after he apparently caught his wife having sex in his bed with a local man. After a cross phone conversation, in which a friend of mine called him a '*chifrudo*'[14], he returned from his exile and attacked my friend's front gate with rocks. This unpleasant incident drew out many neighbours who stood at their front gates and watched as he was physically restrained by his family. My friend reported this to the police and proceedings against Paco ensued. One day my friend came back from giving a statement at the police station and recounted the policemen's hilarity at their discovery that he actually *was* a '*chifrudo*' when they found in their files on Paco, the stated motivation behind previous examples of criminal behaviour. She returned to this theme several times over the next few weeks, always ending her tale with tears of laughter.

Other cases involved more insidious, but equally real emotional and material results. One account of a more long-term build-up of resentment can be seen in my friend, Julia's, story of her marriage. In the heat of December I went to Julia's house, and as I sat down on her sofa she began telling me how she cleaned underneath it and as a result had felt her allergies return with particular strength. She tutted, exclaiming that I should look at her floor, "I've passed a cloth over the entire floor and it is black again now!" she said. Our conversation moved on to the religious services she attended. She explained that during services the bible was opened at random, and the word of God was there to be read. She gave me an example by opening her bible randomly on Jeremiah 3 and she read:

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[14] '*Chifrudo*' is an insult meaning 'cuckhold'. It stems from the word '*chifres*' or horns.

If a man divorces his wife

and she leaves him and marries another man,

should he return to her again?

Would not the land be completely defiled?

But you have lived as a prostitute with many lovers—

would you now return to me?"

declares the Lord.

"Look up to the barren heights and see.

Is there any place where you have not been ravished?

By the roadside you sat waiting for lovers,

sat like a nomad in the desert.

You have defiled the land

with your prostitution and wickedness.

Therefore the showers have been withheld,

and no spring rains have fallen.

Yet you have the brazen look of a prostitute;

you refuse to blush with shame.

Have you not just called to me:

*   'My Father, my friend from my youth,*

will you always be angry?

*   Will your wrath continue forever?'*

This is how you talk,

*   but you do all the evil you can."* [15]

*   (The Holy Bible: New International Version*, 1984 Jeremiah, 3)

She went on to say, "Ah ta, this is about prostitution. God says that if a man leaves

his wife, and gets together with another woman, God doesn't like it. This man is not

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living by the word of God. God made man and woman from the same body. The woman came from the rib of the man. When they are married, the man and the woman become one person. So the man has to look after the woman. Whatever happens, they should always be united, together". I sat listening while Julia began to explain that her husband broke their married unity. She described his behaviour as if he too had also 'lived as a prostitute with many lovers'.

She continued, "I suffered a lot with him. He brought women here into my house, and I got up to go to the kitchen and found out that he had other women here. I put up with it for a long time, but then he sold my car. It was mine too, I mean, I had saved up the money to buy that car, and anyway, I helped financially, and everything that he had was half mine. He sold it and gave the money to his other woman. I was so angry Delia.". She paused and looked at me for a reaction.

She continued, "At first he lied and said the car was left at the office, and after a while I asked more about it and he said that he had sold it, and given the money to her. He said that she needed it more than I did. I said he should go and live with her then and he said that he wasn't going to leave, because this was his house. Oh, I suffered, Delia. And that was only the start of it. It was so difficult. I pulled out the bed from under my daughter's bed and stayed there. He stayed in the marital bed. He didn't live by God's word. He was with so many girls there in the Conjunto. He gave them money, and they gave him…"

She gave me a look and I knew she meant that they gave him sex.

"That is why he is so old and wasted now, because he hasn't lived by the word of God."

Julia still had a kind of friendship with her ex-husband and his new partner, many years after her separation. I said, "it must be difficult to see him now, after everything that happened?".

She replied, "It is, yes… But God spoke to me and said he will return to me. I told God that I didn't want that, if he was going to return to me as the same person. He has to come transformed. I don't want to live through all that pain and suffering that I have already lived through. I have been 15 years without anyone. I did have a

boyfriend, but I ended it when I found the word of God, and realised that I can't be with anyone while my husband is still alive, because it would be like prostitution. God wouldn't approve. I can't live in sin like that. I am at God's service now, and I have to respect his word". In Julia's story there was a strong resentment about her husband's sexual and financial betrayal of his conjugal role. Julia's pain was very real and seemed to be close to the surface. She related to me that she worried that the experience of having a father who had broken their marital bond may have affected her daughters' present relationships and that her feelings affected her relationships with her ex-husband and his new partner, as well as her ability to form new intimate relationships.

Julia's daughter, let us call her Ana, was also an evangelical Christian and occasionally attended the same religious services. She was married (or in a long-term live-in relationship), and while I was in Santa Cruz she separated from her husband Wilson, stating that she was no longer prepared to look after the household expenses and do all the housework without his help. She went out casually with a few men after this and learned that her ex-husband was having various relationships of his own. She was then told of a divine revelation an evangelical neighbour had experienced, that Ana's husband would return to her. They did get back together and he moved back into their family home. Later in the year, she began to suspect that he had continued his relationship with another woman. She told me that she found this possibility insulting, especially as she had found herself continuing to shoulder the burden of all the housework and the financial burden of maintaining the household. For Ana, it was the idea that she was taking care of her husband while still feeling unsure that he was sufficiently dedicated to their monogamy that was a sufficient affront to break up their relationship. Ana was financially independent and was able to reject a man who was financially dependent on her, unwilling to take on what she considered as his share of the housework and bills, when he was potentially involved in extra-monogamous relationships. Ana took pride in rejecting her long-term partner Wilson and told me that she was better off without him. Only after their separation

did she find out that she had in fact been correct that Wilson had continued his relationships with other women.

In both Ana's and Julia's relationships it was a combination of sexual and financial betrayal that had led to changes in their circumstances. Julia's suffering had gone on for so long that it must now be considered at least partially untethered from the revelation that her husband was engaging in multiple sexual relationships. Her attitude to her situation had changed throughout this time, at one point having another relationship herself, and then later rejecting that possibility entirely; but she claimed she had quietly suffered for decades. In contrast Ana did not wait for a revelation but it was the link between her suspicion about her husband's potential sexual betrayal and his unwillingness or inability to contribute to the home that led her to leave him. For Ana, her discovery that Wilson had had extra-monogamous relationships coincided with her renewed sense of positivity; she reported feeling that her decision had been vindicated and that she had exercised power over her own life.

Extra-monogamous relationships in absentia

I personally experienced a jealous reaction from a woman in the area where I lived. I had had some problems with the ceiling light in my kitchenette and my landlady called in André, a middle-aged electrician looking for work. A few weeks after he fixed my light I began to experience the same electrical fault again, so while having coffee with some friends on an upstairs terrace near my home, I called out to him as I saw him pass by on the road below. My friend hushed me and beckoned me away from the edge of the balcony.

Daniela, a friend of mine, said,

"I had not wanted to tell you this, but you shouldn't be talking with André"

"Why" I asked as she motioned for me to sit down.

"After you had come here that first time to look at the kitchenette, but before you arrived to stay, André's girlfriend Selena came up to me and said that you were not to talk with André, and that if you did she would slash your face open".

"What? Why?" I asked.

"Because she is jealous, Delia"

"But that is stupid, Daniela, she hadn't even met me. In fact I still haven't met her"

Daniela explained, "After your visit to see your kitchenette, you know, when you first came here, there were some rumours that perhaps you might need a driver, after it became clear that you would be staying here. It was suggested that perhaps André would drive you around."

I laughed briefly and nervously, and Daniela joined me. I was surprised by the suggestion that I might need a driver. It occurred to me then that people had had a particular idea of me before I arrived, as the sort of well-to-do person who would need a driver. I wondered uncomfortably for a moment, whether people still thought of me like that. Daniela went on to say, "so André's girlfriend thought that she needed to warn you off André".

I asked, "Do you think that André, or anyone else, suggested to her that I had been flirting with him?"

She said, "No Delia. She's just jealous. I told her that she wasn't going to touch anyone who came to live around here, because to do so she would need to go through me, and that would be very difficult for her". Daniela had a way of repeating what she was saying to drive home her point. In this way she assured me that André's girlfriend wasn't going to do me any harm because she would protect me. I was left feeling a bit unsettled.

Later that year I went to a Friday night church service at one of the local evangelical churches. At the church service I saw André and his partner Selena together. I stayed at the back of the church and tried not to be seen (which was difficult as there were only about fourteen people in attendance). The next morning I met André's partner Selena in the street. She shouted after me as I walked in the direction of a meeting I was heading to. I said hi, but that I was in a bit of a rush. Selena said,

"it's ok. I just wanted to introduce myself. I didn't speak with you yesterday at the church service, and I wanted to say sorry for that." She gave me a hug, and a kiss while I wondered whether she had had a change of heart.

I said, "don't worry, that's fine" thinking that was that. But she carried on, with a slightly altered tone of concern and aggression,

"I asked you not to talk with André, ta? You know that right?".

I was a bit stunned, and I didn't know what to say. Later I thought to myself that I should have asked why she was so concerned about this and I kicked myself at the thought of a lost anthropological opportunity. At the time all I managed in response was, "umm, ok!". I remember feeling like I couldn't be bothered with the extra hassle of having to deal with what I interpreted as passive-aggressive behaviour. I wondered what she thought I was going to do? If she thought I would lure André away, then that would imply that she trusted neither him nor me. This is an example of jealousy that, for Selena, obviously required action, even in the absence of my involvement with extra-monogamous intimacy. I have no information as to André's behaviour in their relationship, and do not know if he was generally involved in non-monogamous intimate relationships, nor can I say whether other people had informed Selena of any suspicions regarding my relationship with André. However, the most important point here is that for Selena, her jealousy was real and it was a negative feeling that demanded action. It didn't matter whether the extra-monogamous intimacy existed or not, and it hardly mattered if it had been 'revealed' or not. What mattered was that Selena suspected it existed or that it could possibly exist or that there was the potential for it in the future. Her request that I not talk to André was a preventative warning and a prophylactic action to prevent possible extra-monogamous intimacy.

Conclusion: Jealousy and mistrust

During my time in Santa Cruz I learned that while an implicit understanding of normative monogamy was shared, there was also an explicit acknowledgement that monogamy was difficult, fragile and even in some cases, potentially unlikely. People didn't generally speak directly about how relationships *should* be monogamous precisely because it was taken for granted that relationships *should* be monogamous. Unspoken norms are no less real because they are unspoken. The implicit understanding that relationships should be monogamous, together with the often explicit reminders that multiple simultaneous sexual relationships happen,

were the motives behind Selena's threats towards me, they led to my avoidance of Antonio, they prompted Paco's outburst and they were the context for Julia's and Ana's separations. Emotional reactions to breaking the established norm of monogamous relationships can vary greatly over time within one individual, between members of the same family and between members of the same religious congregation. Here we have observed the emotional states of jealousy and the sense that that jealousy required aggressive action, worry that family members were negatively affected by extra-monogamous relations, a loosely defined 'suffering', anger at being called a cuckold, as well as pride and a feeling of power in one's own life, The emotional consequences of extra-monogamous relationships varied, but were usually present in the João XXIII area of Santa Cruz.

Jealousy and distrust are not exactly the same, but, as discussed in the introduction to this chapter, they are related. Jealousy can be seen as inversely correlated with dyadic trust in intimate relationships (Dainton and Aylor, 2001; Kemer, Bulgan and Çetinkaya Yıldız, 2016). The examples of jealousy described above point to the existence of distrust in intimate, and close interpersonal relationships. This is important to our understandings of the wider climate of mistrust that I go on to discuss in the next chapter. Chapter 6 will discuss how distrust can characterise relationships in all aspects of life in the João XXIII area and set out the relevance of this to the environmental conflict in Santa Cruz.

Chapter 6. (Mis)trust

Introduction

While the chapters in this first section of the main body of this thesis have dealt with different topics, the underlying theme of trust and mistrust, in the João XXIII area of Santa Cruz, has emerged from them all. In this chapter I go on to explore the question of trust through the lenses provided by the history of drug trafficking in the area, the presence of a militia in the João XXIII and understandings of sexual and intimate relationships amongst the people I lived with during my fieldwork. These themes correspond to three separate chapters (3, 4 and 5 respectively). The themes examined in these three chapters have all been much discussed within anthropology. In the case of Chapter 3, I have referred to well-established theories to explain what I observed in the João XXIII sub-neighbourhood. Chapter 3 provided some background and contextual information about the João XXIII area of Santa Cruz in Rio de Janeiro, and went on to discuss memories of the region before the factory was first established, including memories of drug trafficking in the area. I discussed how and why initially apparently contradictory memories of the area (stories focusing on drug trafficking related violence, and narrations presenting the region before the establishment of the TKCSA as a natural paradise) can in fact be mutually coherent representations of João XXIII.

In Chapter 4 I used arguments regarding the militia as a starting point and built upon them. This chapter discussed the impacts of the presence of a militia in Santa Cruz and some of the similarities between the militia, the police and drug traffickers. In Chapter 5 I argued against a particular anthropological argument made in the context of Brazil, about 'infidelity' in sexual and intimate relationships. In this chapter I looked at the various emotional consequences of multiple concurrent sexual and intimate relationships, in a setting in which normative understandings of 'ideal' intimate partnerships were centred around monogamy. These arguments will be integrated into this, the final chapter of this section (Chapter 6), which uses these themes to make an argument about trust and mistrust in the area

immediately surrounding the TKCSA, and its relevance to relationships between the company and residents living around it.

Understandings of trust and a Brazilian focus

Political scientists, philosophers, sociologists and anthropologists have explored the issue of trust extensively. The literature on the subject is prolific and there is too much of it to adequately review here. The definition of trust has been the subject of much discussion. Simmel's classic characterisation of it is as a belief that future behaviour will occur in a particular manner, which provides enough certainty so that one can act on that basis (Giddens, 1990; Carey, 2017). Drawing on this foundational definition much sociological description of trust has focused on the function of trust (Liu, 2008). Niklas Luhmann viewed trust as a means through which individuals deal with complexity (Hardin, 2002; Liu, 2008) and Putnam et al. described the ways in which trust facilitates coordination and cooperation (1993).

Trust has been treated as an issue of note in discussions of modernity; having been identified by some as a modern concept (Seligman, 1997; Marková, Linell and Gillespie, 2008). Some have claimed that increasing automisation reduces the need for interpersonal trust (the use of credit cards, for example, reduces the need for interpersonal interaction) (Lianos and Douglas, 2000). Others that the increasing role differentiation characteristic of modernity, and the decline of the ability to maintain familiarity, has led to the development of new forms of interpersonal trust and confidence in institutions (Seligman, 1997; Marková, Linell and Gillespie, 2008). Yet others have focused on whether or not a crisis has developed in industrial-technological societies as new challenges to social trust have emerged (Banks *et al.*, 2000; O'Neill, 2002), with particular attention paid to decreasing trust as a corollary to increasing consciousness of risk (Beck, 2001). Here, I focus on the *feeling* of mistrust – it was the way that the *emotional elements* of mistrust manifest themselves in daily life that is important to understanding the conflict surrounding the TKCSA. The feeling of mistrust, like other emotions, requires both a judgement and a corporeal response. To follow the thread of mistrust in the João XXIII area of Santa Cruz means to discover why mistrust

occurs, which relationships are affected by it, how does it interact with other emotional states, how does it affect understandings of, and approaches to the TKCSA in the context of environmental conflict. Here, I examine the ways trust, mistrust and distrust are manifested in social relations in the João XXIII and argue that an understanding of these dynamics allows us to better understand the approach that local residents have towards the TKCSA and the governing institutions that have supported the company.

Given that there is so much writing about the subject, given the lack of space to deal with all aspects of it adequately here, and given that my research has taken place in Brazil, I have chosen a theoretical focus on Brazilian anthropological literature dealing with trust and mistrust. More specifically, I discuss these issues in conversation with Roberto DaMatta's theory regarding public and private spheres of life in Brazil. DaMatta has famously offered a loose dichotomy between the 'world of the home' and the 'universe of the street' in Brazilian life, where trust can be most commonly associated with the former, and mistrust more generally found in the latter (2007). In this chapter I try to complicate this picture, showing how distrust can permeate all 'spheres' of life in the João XXIII while negating the idea that mistrust is an a priori expression of a Brazilian national character trait. I seek to build on this theory using some aspects of Russell Hardin's 'street-level epistemology of trust' in which he develops an analysis of trust as 'encapsulated interest' (1993).

Hardin argues that trust is built on the truster's expectations of the trustee's interests. To trust someone is to believe that the trustee's interests are bound up with one's own interests in a particular context or situation (2002). It is the knowledge of the truster about the trusted (Hardin, 1993), the expectation that they share interests in common, and the commitments made by the trusted, that maintain on-going relationships of trust (Hardin, 2002). If the truster has no experience of the particular person to be trusted, then they may generalise from past encounters with others (Hardin, 2002). In the same way that one might have specific grounds for trusting someone to do a specific thing in a specific context,

Hardin argued, one may have specific grounds to distrust someone to do a specific thing in a specific context (2002). It is this idea that distrust can be a result of knowledge of past behaviour, and understandings of the motivations of another, that I particularly draw on in my adaptation of DaMatta's theory, to apply to the relationships many people living in the João XXIII had with the TKCSA.

Hardin makes some distinction between interpersonal trust and trust backed up by institutions (2002). In his elaboration of trust in relation to institutions he tends to focus on the ways that they can positively reinforce trust by acting as intermediaries (Hardin, 2002). He argues that the individual motivations, and understandings of them, which form the basis of trust cannot be generalised to the level of institutions (Hardin, 2002). Hardin claims this is because, according to his account of encapsulated interest, it is not possible for individuals to know that an institution, organisation or agency will wish to maintain their relationships with any one individual (2002). This argument concurs with those that point out the limitations of the treatment of corporations as if they were individuals (Welker, 2016). However, as Stuart Kirsch has pointed out, the view of corporations as *persons* is a common one that permeates many social understandings of large companies as having some of the habits, capabilities, rights and responsibilities of the person (2014, p. 208). Here, in the final chapter of this section, I discuss social understandings of the TKCSA and the general inclination towards mistrust of the company and the governing institutions that supported the company's position in Santa Cruz. I argue that many of the people I knew in the areas surrounding the TKCSA experienced significant distrust of the company and other institutions based on their knowledge of, and perceptions of, the actions those institutions undertook, their understandings of company and governmental motivations and their interpretations of whether or not those institutions shared interests with the local population. During my fieldwork the people I met expressed distrust of specific role-holders within the company and governmental institutions, a more general mistrust of the motivations and objectives behind corporate and government behaviour, and an understanding of the company's and the relevant governing institutions' social relationships with people living in Santa Cruz.

Why 'mistrust' and 'distrust'?

In this chapter I use both the terms 'mistrust' and 'distrust' following the common usage in English, which emphasises the *general* in the term 'mistrust' and the *particular* in the use of the term 'distrust'. Matthew Carey has explained that his choice of the term 'mistrust' reflects his preoccupation with a general disposition towards mistrust (2017, p. 8). The difference between the two terms isn't one that I focus on given that, in the João XXIII area of Santa Cruz, I believe that general mistrust and particular distrust are inextricably interrelated. My account of mistrust in Santa Cruz necessarily incorporates interlocutors knowledge of particular experiences as well as a more general disposition based on a multitude of accumulated experiences and wider social attitudes.

The aim of Section 1 of this thesis is to explore the dynamics of trust and mistrust as they occur in the lives of some of the people living around the steel factory, and to incorporate this into our understanding of the local campaign against the TKCSA and relations between people living in the João XXIII and the company. I have plotted this path through discussions of drug trafficking, the militia governing the area and interpersonal relationships, eventually reaching an explanation of the formation of distrust around the steel factory in Santa Cruz. This, I hope, incorporates the complexity of the social relations in which the TKCSA is embedded and provides a rich background from which to go on to explore debates around the impacts of the factory on local people, and the emotions that surface through the conflict surrounding the TKCSA.

The world of the house and the universe of the street

Various social theorists and commentators have described popular tendencies towards mistrust in urban life in Brazil. Many have emphasised mistrust in public institutions, the State, political elites and the rule of law. Darcy Ribeiro has noted the prevalence of animosity towards the State amongst Brazilians (2010). Moisés and Carneiro have claimed that while Brazilians support democracy per se, they mistrust Brazilian public institutions (2008). In their investigation of political

mistrust, Power and Jamison have argued that mistrust of politicians in Brazil is one aspect of a syndrome of low trust across the board (2005). Barbosa et al. have found that the most trusted institution in Brazil is the family and that political institutions such as political parties, municipal governments and National Congress are thought to be the least trustworthy (2013). This emphasis on distrust of politicians and state institutions seems to be almost universally acknowledged.

Perhaps most famously, for anthropologists interested in Brazil, Roberto DaMatta's theory about public and private spheres of life in Brazil, has implications for theoretical understandings of trust in the country. DaMatta argued that Brazilians are torn between two separate spheres of life. One is what he called 'the world of the house' which is stably governed by the rules of kinship relations. The other is the 'universe of the street', a spatial term which can also be metaphorically applied to social relationships. The universe of the street must be historically located as it is subject to greater levels of change than the world of the house; it is where 'politics' is thought to occur (2011). The street is an unpredictable impersonal space where public life occurs which, for Brazilians, calls for separation and individual distance (DaMatta, 2007; Jovchelovitch, 2008). He argued that the world of the house, and the social relationships that take place in that realm, are not subject to the kinds of trickery and roguery that are evident in social relations of the street (DaMatta, 2011).

Furthermore, DaMatta has argued that Brazilians mistrust universally and anonymously applied laws and rules, preferring instead the hierarchizing morality of relationships. He identified the statement "do you know who you are talking to?" (*"Você sabe com quem está falando?"*) as an example of attempts to appeal to social identity and relationships in order to resolve conflicts (DaMatta, 2007, p. 169). The phrase is used to move away from the anonymous 'individual', subject to impersonal, universal laws, and towards the 'person' who is embedded in concrete and biographical personal relationships. For Brazilians, he claimed, more universally applied 'political' activities are challenged by loyalty to family and other social relationships associated with the world of the house. DaMatta examines the

dynamics of trust in Brazil as they are shaped in accordance with ideas differentiating close others from distant others (2007, 2011; Jovchelovitch, 2008). I recognise some of the distrust in public spheres of life in Brazil that has been identified by these social theorists. This can be seen in my field notes in the many warnings about safety in specific geographic areas of Rio de Janeiro, and in discussions about politics in the context of growing calls for the impeachment of Dilma Rousseff in 2015.

I have discussed that Santa Cruz, and particularly the João XXIII area of Santa Cruz is, in many ways, quite disconnected from other, wealthier areas of Rio de Janeiro. What I had initially understood as a one-sided expression of distrust coming from middle- and upper-class Brazilians towards lower income communities, based on a socio-economic gulf between Santa Cruz and South Rio de Janeiro, I later understood as a multi-faceted issue of trust between residents of different neighbourhoods. Warnings about the lack of safety in Santa Cruz were proliferous, from many people living in, for example, Laranjeiras and Botafogo in the wealthier southern zone of Rio (see Chapter 3). However, when I arrived in the João XXIII area of Santa Cruz, I was similarly dutifully informed that the central and southern zones of Rio de Janeiro were extremely dangerous, and I was given detailed suggestions for how to avoid danger in these areas. I could roll up my money and put it in tissue paper down my bra, I should have access to small monetary denominations, so as not to handle large amounts of money in front of other people. Friends suggested that if I visited bars in Copacabana or Barra da Tijuca I should never leave my drinks unattended, even with people who I considered friends. It was suggested that perhaps I should avoid the Ipanema beach so as not to be caught in an 'arrastão' (a term which is used to describe mass robberies, often occurring on beaches). Television news reports of violence in other areas of Rio de Janeiro, were commonly held up as evidence that these places were extremely violent and dangerous.

Similarly, distrust of politicians and institutions was reiterated time and again in different ways, during the thirteen months I spent in Santa Cruz. I arrived there

shortly before Dilma Rousseff and the *Partido dos Trabalhadores* won the national election in 2014 and I left Brazil one month after the then President of the Chamber of Deputies, Eduardo Cunha, accepted a petition for Dilma Rousseff's impeachment (Romero, Sreeharsha and Rousseau, 2016). Throughout 2015, the year I spent in Rio de Janeiro, the investigation into a major corruption scandal, 'Operation Car Wash' or the '*Lava Jato*', unfolded in the public sphere, implicating politicians from across the political spectrum, at many levels of government, including senators, Congress members, former Congress members and Rousseff's replacement Michel Temer (de Almeida and Zagaris, 2015; Saad-Filho and Boito, 2016; Taylor, 2016; Watts, 2017). Major Brazilian construction firms, the state-controlled oil company Petrobras and the Brazilian conglomerate Odebrecht, were also found to be involved in this corruption scandal involving billions of dollars (de Almeida and Zagaris, 2015; Watts, 2017). This scandal further entrenched the idea that bribery is common practice in business deals and amongst Brazil's political establishment (de Almeida and Zagaris, 2015). The rise of a broadly right-wing movement instigating large protests in Brazil's major cities, calling for the impeachment of Dilma Rousseff, and in a few cases for a return to dictatorship, was illustrative of the levels of mass contempt for corrupt politicians (Ab'Sáber, 2015; Saad-Filho and Boito, 2016). While people I knew in Santa Cruz did not, to my knowledge, attend these large-scale protests, frequent conversations about this scandal with the people living in the João XXIII area of Santa Cruz usually involved a sense of angry resignation at what was seen as the inevitability of corruption in government.

Theories regarding distrust of the institutions, social structures and relationships external to the household are captivating, and quite neatly explain the widespread distrust of government and its institutions as well as distant or unknown others. The association of trust and family, and between distrust and the wider world, was detectable in the João XXIII area of Santa Cruz and I will go on to flesh out those associations further in this chapter. DaMatta's separation between house and street was never complete (2007), and I will expand on some of the points of blurred separation between these two spheres in the context of Santa Cruz. However, I

contend that adherence to the theoretical structure of DaMatta's argument somewhat obscures the finer details of my own informants' explanations. In DaMatta's work this is exacerbated by the level at which his claims are made, that of the Brazilian national character. I have tried, throughout this section, to stress the explicative rationality behind social representations of distrust in João XXIII. The idea has been to explain observed social phenomena by anchoring it in the sometimes emotionally confusing and morally risky intersubjective space between my own experiences and those of the people I met in João XXIII (Jackson, 2009). While anthropologists may make links between things, and see them as indicative of something else (Strathern, 1995), it is also true that it is productive to go back to the statements and understandings of informants themselves (Zaluar, 1994). It is through informants' reasoning, and their emotional engagement with trust and distrust, that I hope to complicate the understandings of trust discussed above.

I have chosen to focus on trust and mistrust for various reasons. Widespread mistrust was one of the things I first noticed when I arrived in Santa Cruz, and one of the most enduring issues to pull at my attention throughout my time in the area. Understandings of trust and mistrust set the stage for understanding the perspectives and experiences of some of the people that I met in the João XXIII area of Santa Cruz. While trust in some form or another may be important for all societies (Simmel, 1978; Baier, 1986; Seligman, 1997; Barbalet, 2009), social relations in the João XXIII seemed especially marked by questions of trust and mistrust. I argue that mistrust could be found throughout all levels of social engagement in the area. As I have already discussed, mistrust can be found in approaches towards politicians and political institutions, as well as towards strangers and people inhabiting different geographical areas and social strata. I will go on to discuss mistrust in understandings of public security as well as in approaches towards acquaintances, 'friends', lovers, monogamous intimate and sexual partners and finally close family.

Some sociologists and anthropologists have noted that the discussion of mistrust has been subsumed into understandings of trust. Mistrust has often been dealt with

as though it were purely the symmetrical reverse of trust (Hawley, 2014; Carey, 2017). I argue that trust is based on, and often aligned with, traditional and extended kinship relationships, as DaMatta has argued (1986, 2007, 2011). However, *mis*trust is based on previous experience and expectations of motivations and behaviour (Hardin, 1993). Understanding this basis for mistrust allows us to better grasp why people who live in João XXIII perceive the TKCSA in the ways they do.

Mistrusting street life

In line with DaMatta's arguments, mistrust was evident in public life in João XXIII. It was made evident in attempts to maintain individual and familial boundaries. This was commonly referred to as 'not getting involved', in the João XXIII area. This approach was often implicit in discussions of issues of public security and personal safety, although occasionally it was spelled out in conversation. The logic of 'not getting involved' was made clear in understandings of recent historical events in the area, and persisted in the ways in which people continued to approach issues of security in the João XXIII. While the area was controlled by armed trafficking groups, and after militia takeovers in the region, 'getting involved' was viewed as a negative life choice that was best avoided. Local narrations of the murder of a young man and the gruesome display of his body emphasised this man's 'involvement' (see Chapter 3). It was thought he had not, as survivors of that period had, maintained as much distance as possible between himself and the traffickers. His actions were portrayed as particularly damaging examples of 'getting involved'. This young man had been involved in a way not seemingly acceptable to the traffickers, by either forcing a young girl into having sex, or threatening to do so. His father, who had not 'got involved', had survived his son. I contend that the people I knew in the João XXIII area made clear attempts to segregate their lives from the activities of drug traffickers and later the militia because they did not trust those two groups, based on their experiences of trafficking and militia violence.

In the following extract of an interview, a friend explained this logic well. He said, "Let's put it this way. You have a lion there, and a tiger here. You want to pass by,

along the street, ne? You know that you have two things you have to deal with, and if you do not mess with either of the two, no one will attack you, ne? My thing was, I've lived here for thirty years and I'm alive till today, why? I never got involved. We have a saying here in Brasil, 'he who mixes with pigs, eats bran' ('quem se mistura com porcos, farelo come'[16]). If you get yourself mixed up with people that aren't worth anything, if you hang around with people like that, what tends to happen? Many people here got mixed up with things that are wrong here, with trafficking. They ended up dying, or they were thrown out, and others, who didn't get involved, continue here till today. So I think that I am one of those that never got involved. It was always house, work, school… Of my colleagues that I played football with, them here in that pitch there, only a few are alive today. They got involved with trafficking, robbing, mugging. They died. But they were weak, ne? They got involved, and that's where the saying comes in, he who gets involved with bad things, is going to eat that bad bran". In my friend's argument he presented the idea that getting involved is a sign of weak or bad character that can lead to terrible consequences.

The militia control over the area appears to have consolidated these feelings that keeping oneself to oneself is the most effective way to stay safe. Friends in the João XXIII often warned me to stay away from the militia. I was warned by some not to spend time at the 'militia bar' and told not to take photos of the 'militia bar' so my research would not be mistaken for interest in the militia (see Chapter 4). A friend of mine told me that she worried for her children when they went to the open-air funk music dances in the local area, which she associated with the militia. She argued that because it was 'full of militia' they might somehow find themselves inadvertently involved with militia violence. On various occasions I was told that the ideal situation was that residents would have as little as possible to do with the militia. Over a drink with my friend Rafaela, she mentioned that the bar we were at was frequented by militia members. I asked if this worried her and she told me, "I

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[16] '*Quem se mistura com porcos, farelo come*' is a saying in Portuguese, which denotes that unfortunate consequences will occur when one gets involved with people who are considered to be bad in some sense or another.

don't have anything against the militia, because I know how to behave. It is me over here, and them over there. I keep over here, entendeu? I keep myself to myself and I keep separate. I don't get involved. I don't like to be around things that are being done that are wrong. I try to stay away from that". Rafaela meant that she not only avoided the people she could identify as milicianos, but also she avoided prohibited behaviour that could call their attention her way. For Rafaela, it was her choices that kept her safe.

A few people I knew revealed a slightly different understanding of their relationship to the people governing the local area; whether traffickers or *milicianos*. Isabelle described her family's relationship with the traffickers as 'friendly' (see Chapter 3) especially in comparison with the traffickers controlling other areas more recently[17], or with militia control of the João XXIII. She was the one person who admitted to me that she had had a more relaxed relationship with traffickers and militia members. Isabelle was prepared to get involved to the extent that she could maintain nominally positive relationships with traffickers or *milicianos*, in order to keep herself and her family safe. However, she too was highly critical of both forms of social control, citing the fear that she had grown up with as a child when warring trafficking groups put her and her friends in danger and likening the militia to criminals (I discuss the ways that militia, traffickers and the police are perceived to be alike in Chapter 4). Her involvement with the traffickers and then the militia occurred only as much as she felt was necessary or beneficial.

Many social theorists have commented on the links between risk and trust. Michalis Lianos and Mary Douglas argued that awareness of danger grows as a response to anomie (Lianos and Douglas, 2000). Ulrich Beck has argued that diminishing trust leads to increasing identification of risk (Slater, Ritzer and Beck, 2001). The links between trust and risk are relevant here in as much as they point to the reasons my informants put forward for their distrust. Over the last few decades the João XXIII area of Santa Cruz has seen considerable levels of violence. As my

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[17] See Penglase for a brief discussion of the notion that relations between previous 'generations' of drug dealers and residents were less coercive than they currently are (2011).

neighbour explained, just living in the area involved risk, and the best way to minimize that risk was to avoid involvement. In this case, distrust in the 'universe of the street' is not only part of a long-standing cultural pattern of behaviour as DaMatta suggests, it is also a rational reaction to concrete events through time. Here I go back to Hardin's understandings of trust as pragmatically rational, in that it is based on the previous experiences of the trusting individual, as well as that person's judgements of the incentives of others to behave in a trustworthy manner (1993). If the people I met had seen numerous previous examples of poor outcomes after people they knew had 'got involved', then it is not surprising that they were wary of getting involved. Their view of relying on others, or trusting others, in the 'universe of the street' appears to have been shaped by their previous experience of seeing the consequences of other people getting involved.

Mistrusting friends and acquaintances

During my time in the João XXIII area of Santa Cruz, I quite quickly realised that the mistrust that I had seen expressed about unknown and potentially dangerous strangers and about politicians, traffickers, police and the militia, was echoed in mistrust expressed about people I knew in the area. Quite soon after arriving I began to hear warnings, from most of the people I knew, about most of the other people I knew. Friends and neighbours claimed that particular people were not to be trusted. Here I go on to explain just a few of the many warnings I received regarding the untrustworthiness of others.

A friend, here we'll call her Laura[18], told me not to trust Victor, another good friend of mine, because she thought he was a thief. In fact, she thought I shouldn't trust the people who lived in the area of the *Conjunto Alvorada* where he lived, and particularly those who lived on his street[19]. She explained, "You shouldn't trust

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[18] I have used pseudonyms in the whole of this thesis. I have altered most pseudonyms, chapter-by-chapter, so they do not match the pseudonyms I have used elsewhere. I have also changed some personal details as well as some information about specific relationships. This is in an effort to maintain anonymity.

[19] No street locations are accurate in this thesis when they are discussed in relation to any specific individuals. The one street to which I refer correctly by name is the *Avenida João XXIII* which was the main avenue running along the border of the TKCSA. This avenue is important to name specifically because it was an important orientating point for residents of the area, because residents living along

Victor. He steals things and sends others to steal for him", as she said this she made a gesture signifying stealing with her hand, stretching all her fingers out, and then curling each one back into the hand to leave a tight fist. "There on that street it is full of thieves, full of them. They all rob people down there. You have to be careful". I later found that the area she described as 'full of thieves', seemed in fact to be populated by friendly people, some of whom, far from doing me harm, even appeared to me to be doing their best to look after me. Victor and his family were very welcoming towards me, they invited me to family barbeques and important family events. Victor's wife always invited me in for coffee whenever I turned up looking for Victor, and I loved listening to what seemed to me to be her solid and grounded view on life.

In return, Victor told me not to trust Laura. He said to be careful of her because she would cause problems for me and I should not get too involved in any of her friendships or relationships. One evening he told me that he wished that he had been involved in finding me a place to stay. He suggested that she had used drugs before, a charge that in the João XXIII area held particular sway because drugs were generally so strictly associated with all things bad. He also claimed that her family had been involved with the traffickers in the past. Suffice it to say that Laura always behaved with immense kindness towards me. She was a confidant, a friend and always welcoming and kind to me. She comforted me when I felt homesick, and told me how the world around us worked, with great patience.

Similarly, Rafaela, the woman who read cowrie-shells[20] for Laura, told me privately that she didn't trust Laura. She claimed a general dislike of the way Laura talked, arguing that Laura swore too much and was too loud. She said that she didn't like

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that avenue were affected by the TKCSA in specific ways due to their proximity to the factory and because it's name was unofficially used as a shorthand for many different sub-neighbourhoods in Santa Cruz. However, in this thesis I make efforts not to link any individuals to small identifiable geographical areas, including the *Avenida João XXIII*. These efforts include anonymisation of informants and places (see methodology for more information on anonymisation).

[20] The '*Jogo de Búzios*' is a divinatory process in which cowrie-shells are interpreted in order to uncover elements of a person's current and future life. This practice is normally associated with the Afro-Brazilian religions (da Silva, 2007), but Rafaela did not explicitly mention this association. For her, her skill at the '*Jogo de Búzios*' was a divine gift she had had since she was a young girl.

to go out with Laura and she didn't want to get involved with her personally, lest she be caught up with any 'trouble'. In fact, Rafaela warned me not to trust Laura as part of my own cowrie-shell reading. She said that I should be very careful around Laura, and not get too involved with her, on a personal level. I should keep my personal life secret, and not tell Laura any details about my friendships, romantic relationships or my financial status. It is possible that this may have been related to the belief in the 'evil eye' sometimes called the '*mau* olhado', '*olho gordo*' or '*olho grande*' as it was called in Santa Cruz[21]. These are beliefs that envy can cause harm to the envied person (Rebhun, 1994; Ansell, 2009; Junge, 2014). One way of preventing this harm is to ensure that others are not aware of any positive elements present in one's life. It is thought that the *olho grande* can work without the direct will or intention of the envious (Rebhun, 1994), and in these cases, the *olho grande* is slightly different from mistrust. However, Rafaela was explicitly cautioning me not to trust Laura because getting too involved with Laura could cause me trouble.

One evening I went out for a drink with Rafaela to the outdoor terrace of a bar. Victor walked past and noticed me, and asked if he could join us for a while. We talked together for about fifteen minutes, in which time Rafaela explained to Victor that we knew each other because she read the Jogo de Búzios for my friend Laura. When Rafaela went to get another bottle of beer at the bar, Victor insinuated that I shouldn't pay much attention to Rafaela. While shaking his head he said that Rafaela wasn't to be trusted. He didn't go into many details but tapped his finger against his temple, indicating that she was mentally unstable. I assumed that this gesture suggested that he thought her beliefs in the divinatory practice of the Jogo de Búzios were unsound. Shortly after Rafaela came back to the table, Victor made his excuses and left. As Rafaela and I were left on our own again, Rafaela told me that I shouldn't trust Victor because he drank too much and was generally known around the area to be a 'problematic' person. She suggested he was a 'negative' person, whose 'overly emotional' manner caused problems for people. When I asked why she thought that, Rafaela moved the conversation onto another subject.

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[21] See Chapter 9 for further discussion of the 'evil eye'.

By this point in my stay in the João XXIII, I was not surprised that two people had expressed their distrust of each other to me, over the same table, in the same evening.

Another close friend, Isabelle, told me not to trust Matheus, a young man who lived nearby. She claimed that Matheus was someone who thought he was superior to others. In our usual bar one day she expanded on this subject, telling me that, "I don't trust him, not even if you paid me one million reais, would I trust him. He is the type of man who, when he is with you, he is together with you, entendeu? He has fun, he jokes. Now, if he isn't 'with you'? It's like this, it is a complicated business, but he will speak badly about you, he will go and say 'Pô, she isn't here, because she is doing this and that'. He will talk badly of you in some way. And he is the type of person who will cause a fight. Wherever he goes, he wants to cause a fight, and it ends up affecting you, entendeu?" Isabelle also said that she didn't trust Lara who lived nearby and ocassionally spoke at some religious services in various different churches in central Santa Cruz. She explained that she had been to one of Lara's services and she had disliked the way in which Lara predicted the future for some members of her congregation. One day she expanded on this story, claiming that Lara had once asked for money to provide a revelation. This made Isabelle doubt Lara's religious convictions, and suggested to Isabelle that Lara was more motivated by the money, than by a true relationship with God.

Similarly, Victor's daughter Mariana, had separately warned me about Lara. Mariana said that her family's relationship with Lara was cordial but strained because of a particular event that had occurred some time before. There had been an event that ended up taking place in a venue that Lara had organised. Mariana told me that Lara had got into an argument with Victor, and told him that neither he, nor his family, could come to the event. Mariana explained that she wouldn't want to rely on, or get too involved with, Lara again. From my perspective, while I didn't know her well, Lara always appeared to be a very caring person. These warnings were usually offered to me to suggest I approached my relationships with caution. I could do this, it was suggested, by not getting too involved with particular people.

Onora O'Neill has claimed that while we may claim distrust, the evidence that we do actually trust can be found in our actions (2002). While we may say we do not trust the police, in general we still call them when under threat; while we may say we do not trust journalists, we still read what they write (O'Neill, 2002). The behaviour and physicality associated with mistrust is important to understanding how mistrust *feels.* The behaviour that accompanied expressions of mistrust often took the form of not getting 'too involved'. Friends who did not trust others would avoid the company of the 'untrustworthy', and when they could not, they would reduce their input in conversations and withdraw from as much involvement as possible. Isabelle made efforts not to socialise with Matheus, for example, and Rafaela seemed unconvinced about invitations from Laura to go out to a bar. As with mistrust of the police, militia and drug traffickers, the behavioural reaction to distrust in one–to-one relationships was to not get involved and to maintain a degree of individual containment in relation to the supposedly untrustworthy. I sometimes noticed this as a kind of physical 'tightening up' of the mistrustful person; by this I mean such things as the slightest pursing of the lips, alterations in posture, or moving one's gaze towards something outside the conversation. I believe that these corporeal inflections betrayed a reticence to share in intimate emotions, an occasional unwillingness to be oneself around the distrusted person, a more general guarding against vulnerability and sometimes by a barely perceptible, and difficult to describe, sense of satisfaction that the distrusting person could maintain a barrier between themselves and the distrusted person.

The claim of distrust was usually rooted in one type of explanation or another. Isabelle explained to me why she distrusted Lara's motivations and why she found Matheus to be untrustworthy. Victor narrated his concerns about Laura with reference to what he thought of Laura's past behaviour. It was a particular event that Mariana's expression of mistrust hinged upon. People's mistrust in particular individuals living in the João XXIII area was based on past experiences and understandings about motivations (Hardin, 1993). However, sometimes distrust was not based on personal experiences of any one individual, rather it was based

on belief systems about what a particular 'group' or 'type' of person might be likely to be motivated to do. Untrustworthiness and distrust are not contained in individual bodies, rather they are mediated through the history of relationships.

Here Sara Ahmed's work is instructive. She explored how the distrust of young black men in the US, and its sometimes-fatal consequences, are entangled with a racialised history. She argues that some bodies are recognised as strangers because that recognition is learned in advance (Ahmed, 2014a). An example of this kind of mistrust was expressed by evangelical Christians about people practicing Afro-Brazilian religions, or 'Macumba' as they called it[22]. In the evangelical church services I attended the idea that '*Macumbeiros*' practiced the work of the Devil and were motivated by evil, was regularly expressed. The warnings I received about '*Macumbeiros*' are examples of religious racism widely expressed in evangelical Christian churches throughout Brazil (Selka, 2010a; de Souza, 2015; Rodrigues, 2021). This type of mistrust is learned, and cannot be located in one individual, rather it is intersubjective in that it emerges from the history of the relationship itself. It spreads between different spheres of social life and connects us to our past. In this case the evangelical distrust of '*Macumbeiros*' is rooted in the history of slavery and racism as well as the development of different churches in Brazil (Hayes, 2007; Rodrigues, 2021).

This brief view on the many expressions of mistrust I experienced while in Santa Cruz, fits in with DaMatta's theoretical claims bifurcating the world of the house from the universe of the street. These relationships could be classed as relations pertaining to DaMatta's street (2007). We will now turn to mistrust in family relationships and within the home.

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[22] 'Macumba' is a term used to describe various mixtures of Afro-Brazilian religions particularly associated with Rio de Janeiro (Gudrun Jensen, 1999). The term has a complex historical development and there are disagreements in the literature about what constitutes Macumba (Hayes 2007). It has long been particularly associated with occult practices including 'sorcery' and 'black magic' and is widely considered to be a pejorative term (Ferreira de Souza, 2015; Hayes, 2007; Selka 2010). 'Macumba' was the expression most commonly used by the evangelical Christians I met, to describe any Afro-Brazilian religious practices, and it commonly carried negative associations. See Kelly E. Hayes *'Black Magic and the Academy: Macumba and Afro-Brazilian "Orthodoxies"'* for a discussion of the potential origins of the term, its meanings and pejorative associations (2007).

Trust and mistrust in the 'world of the home'

DaMatta isn't completely clear about what kinds of relationships constitute his 'world of the home'. I assume that these relationships include sexual and intimate partners, parent / child relationships and other inter-generational familial relationships, as well as sibling relationships. This issue is complicated by an acknowledgement of the flexible boundaries of kinship relationships in the Brazilian urban working classes. The phenomenon of temporally and spatially extending families has been discussed by anthropologists working in Brazil (Fonseca, 2005; Shapiro, 2015). I too observed that friends of mine would repeatedly affirm that people I had assumed were friends, were in fact 'family'. This was often linked to statements about how much they trusted this family member and this trust was often associated with being brought up together. This was particularly clear in the case of Gisele and Rafael. They were friends from the same street and I got to know Rafael because he would often come to the local outdoor Funk parties we all attended. Gisele claimed that that she trusted Rafael because he was family. Rafael had spent his formative years on the street playing with Gisele and her brother. He had spent a lot of time at Gisele's house, and this accumulated time together had solidified into a strong sense of mutual trust. The knowledge that Gisele and Rafael had of one another, and the love and care that they had shared throughout their early lives had created a strong sense of trust. These family relationships outside of traditional kinship relations were not uncommon. In this sense, trust was built into family life and was concentrated in close personal relationships, that one could say represented the 'world of the house' (DaMatta, 1986, 2007, 2011).

However, mistrust in the 'world of the house' also existed. In Chapter 5 I discussed jealousy in sexual and intimate relationships. While jealousy and mistrust do not mean the same things (Simmel, 1950) jealousy can indicate mistrust (Salovey and Rodin, 1986; Nomaguchi *et al.*, 2011). The expectation that sexual and intimate partners would engage in extra-monogamous sexual relationships, when the commonly held ideal was monogamy, illustrates that mistrust can and does exist

in intimate partner relationships. This may be based on previous experience of a partner's multiple concurrent sexual relationships, or it may be based on the expectation that monogamy is difficult to maintain. Selena's warning to me, not to talk to her partner André (see Chapter 5), was a reflection of her mistrust of me, but it was also an expression of her mistrust of André. André and Selena lived together, and were in a long-term intimate partnership with each other, but her behaviour towards me appeared to illustrate a level of distrust towards her partner. She was concerned about potential, future extra-monogamous sexual relations between her partner and I, which meant that she did not trust that he would maintain her ideal of a monogamous relationship. Similarly, friends advised me to ensure, as best I could, that I was seen to not get involved with men, so as not to attract the attention of jealous women; this suggests that women might not trust their partners. Not getting involved was, again, a way to avoid the trouble that was expected as a result of mistrusted relationships within the house.

Mistrust was also present in consanguineous relationships. This became clear for me in one particular family I was friendly with. I was able to witness distrust between relatively close family members. On one of the many evenings I spent with this family, the daughter told me about her distrust of her aunt. She was describing how emotionally effected she had been when her grandmother had died, and she added that her grandmother had died due to the behaviour of her aunt. When I questioned her about how her aunt had caused her grandmother's death she responded, "My aunt Ana. This is what I'm saying Delia. Here, there are people who are good and there are bad people too. You can't trust in everyone, just as I've said before. My aunt Ana, you can ask my mum, she caused a lot of problems for my grandmother, so my grandmother would die. She'd say 'You're not dying are you, old woman?', as a way to demand her inheritance. So my grandmother had problems, she got nervous[23] and she had a heart attack. That is what I'm talking about. You have people, that even though they are part of your family, you can't trust them". The maternal aunt Ana was a close member of the family and I had been told of Ana's

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[23] See Nancy Scheper-Hughes seminal ethnography of the Alto do Cruzeiro in Northeast Brazil for a comprehensive discussion of what it is to suffer from 'nervos' (1992).

various problems, including alcoholism, an unstable living situation and a rocky relationship with her own daughter. However, Ana frequently visited the family and sometimes I would join them, and the family would chat over large bottles of beer. I had suspected for a while that some members of this family didn't much enjoy Ana's visits, and this conversation made clear the lack of trust in Aunt Ana.

In a conversation with another friend, Aline, she explained that her half-brother's father was also not to be trusted. Aline explained that this man had killed a small child that the family knew, in a car accident. She said, "he died in a car accident. Really it was an accident with a truck. It is what I'm saying to you, again. You can't trust in people. How can you put a child in your lap while driving? And driving a truck at that? It isn't good (uma coisa pesada). It isn't logical, ne?". Her discussion of distrust was not a neutral one, she was trying to convince me that I was too trusting, and that even close relations may not be trustworthy. While trust can be built up through love, care and getting to know someone through time, it can also be dashed by specific occurrences. One might build up a lifetime's worth of trust, and suddenly have to learn to distrust a particular individual because of something they have done; a past experience which should, it was held, affect one's expectations of the untrusted persons' motivations and behaviour (Hardin, 1993). While trust may be associated with the 'world of the house', mistrust expands beyond the limits of one sphere of life, as delineated in DaMatta's theory of Brazilian society.

Trust and the TKCSA

It would not be unreasonable to question the relevance of these questions of trust and mistrust for understanding people's experiences and perceptions of industrial pollution in the context of the environmental conflict surrounding the TKCSA in Santa Cruz. The connections are subtle, and the appreciation of them allow for an in-depth but particular perspective on the reception that the TKCSA has received from people living around the factory. The importance of the revisions I am suggesting to our understandings of trust and mistrust, and their implications on the way we understand local relationships with the TKCSA, are both practical, and

political. If, in Brazil, trust is mostly restricted to the 'world of the home' and mistrust is the default position in the 'universe of the street' (DaMatta, 2007) then it would not be surprising that a large business such as the TKCSA would be mistrusted a priori. In fact, the basis of that mistrust could then be (mis)identified as a particular expression of a Brazilian national character trait, rather than a reasoned response to the actions that the TKCSA has taken since work first began on the installation of the factory in 2006. If, on the other hand, trust is based on the long-term development of close relationships of mutual care and respect, for example, and mistrust is generated through personal experiences and expectations of motivations and behaviour, then the environmental conflict surrounding the TKCSA can be seen to be based on the historical development of mistrust through the company's actions over time.

These shifts in our understandings of trust and mistrust allow us to remain loyal to informants' views of the world (Zaluar, 1994; Strathern, 1995). The strength of feeling evident in campaigners' objections to the company (see Chapter 3) becomes more perspicuous when it is seen in the context of the TKCSA's actions in Santa Cruz, and when those actions are seen to be contributing towards mistrust of the company. If, as we have seen, there is usually some kind of explanation for distrust that goes beyond a claim that Brazilians simply tend not to trust in a particular sphere of life, then the reason for the mistrust of the TKCSA is likely to be rooted in my interlocutors' explanations for their mistrust, rather than in any predisposition they may have towards mistrust in public life (DaMatta, 2007). This becomes clearer when we delve into the actions of the company to look for reasons why residents mistrust the TKCSA.

A location for the ThyssenKrupp factory was identified in Rio de Janeiro after enquiries with various other countries were rejected (Rio + Tóxico, 2012). This fact was relayed to me time and again by campaigners against the TKCSA. Their point seemed to be that it could only be in Brazil, and particularly in Rio de Janeiro, that the governing authorities would overlook citizens' needs and wishes to such an extent that they would give the go ahead to such a damaging project. The

construction of the steel mill was funded in part with public money as the National Bank for Economic and Social Development (BNDES) provided between R$ 1,48 billion (Viegas, Pinto and Garzon, 2014) and R$ 2,4 billion (Milanez, Scotto, Bossi, *et al.*, 2013). The company also received tax exemptions from the federal and state governments which added up to around R$ 695 million, between 2007 and 2010 (Viegas, Pinto and Garzon, 2014). Other sources have claimed these figures are an underestimate of public money directed towards the TKCSA, and have suggested that nearly R$ 5 billion in public money has been used by the company through public financing, fiscal deferrals and tax exemptions (Milanez, Scotto, Bossi, *et al.*, 2013). I regularly heard residents condemn the governments' use of public money, over which residents felt some ownership, to fund a large European corporation. When set against the poverty of many of the families living around the factory, these negative judgements about the motivations of the Brazilian government were unsurprising.

That the economic plan behind the TKCSA was to export 100% of the TKCSA's steel slabs was another source of resentment among local residents. Brazil's continuing role as an exporter of agricultural, mineral and metallic products, and provider of cheap manual labour, is one that has long been associated with the idea that Brazil was historically formed and developed to provide for the European luxury market (Ribeiro, 2010). Criticisms of the political emphasis on this kind of 'development' in Brazil, involving the export of relatively low-value goods extracted with intensive natural resource use, has been a central part of the work of the *Instituto Políticas Alternativas para o Cone Sul (*or PACS) (Kato and Quintela, 2012), the organisation which has supported local people campaigning against the factory since the emergence of local opposition. Whether as a result of contact with PACS or not, I often heard this criticism of national development policy made by Stop TKCSA campaigners. Victor, for example, often made the wistful comment that he still had a meagre hope that the government would realise the problems with this kind of 'unsustainable development', and close the TKCSA. He hoped they would stop this madness of producing and exporting resource intensive materials, and instead use the land for the development of a new 'sustainable' agricultural

university; an example of very different 'development' aims. He wanted the government to invest in people and knowledge in a more sustainable manner. In this expression of hope there is also recognition that the governments' development aims do not have, as their priority, the people living around the João XXIII. In this case Victor appeared to cling to hope as a brief relief from the everyday drudgery of acknowledgement that this more 'sustainable' option was not a goal of the government. Victor didn't trust the government's intentions. Instead he viewed government objectives as predominantly focused on large-scale business and corporate profits. This fits in with wider distrust of the political motivations of the *Partido dos Trabalhadores*, especially against a setting of prevalent political corruption. In a context in which media representations of political corruption were widespread and public discernment of political corruption was increasing (Ab'Sáber, 2015; Weitz-Shapiro and Winters, 2017) it is unsurprising that the circumstances surrounding the initial establishment of the TKCSA and its political and financial support were the subject of public scrutiny, scepticism and mistrust.

Even before the TKCSA was inaugurated, mistrust of the company was evident as a result of the manner in which the company negotiated with local people, the early impacts of the construction of the factory on fisherman and local families and the way its license was (not) granted. One of the first problems occurred when seventy-five families, living on the land that the TKCSA was later installed upon, were forcibly removed or pressured to leave the region (Kato and Quintela, 2012). In addition the construction of the TKCSA caused a lot of disruption to residents and in my interviews with residents living along the João XXIII avenue they emphasised the noise pollution of the building work and the cracks that the vibrations had caused in their homes.

About six months through my fieldwork, I was fortunate enough to be asked to film protests by local fishers and their families relating to the barrier that the Association of companies of the Industrial District of Santa Cruz and Adjacent Areas' (AEDIN) (of which the TKCSA was the largest company) constructed over the Canal São

Francisco. It was during this process that I began to discover the gravity of the impacts the factory had had on fish stocks in the Sepetiba Bay and the Canal São Francisco. Numerous fishers told me that it had been the pounding and vibrations of the pile drivers during the construction of the factory that first drove the fish away. In 2008 the company was fined by the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) for obstructing a river without permission and for illegally destroying mangrove areas (Amazon Watch, 2012) which provide an important habitat for molluscs, fish and crustaceans and were therefore important to fishermen in the area (Zborowski and Loureiro, 2008). Before the steel mill opened its doors for business, the company had begun to damage the livelihoods and homes of people living around the factory.

These impacts continued all the way through the construction and the company's interactions with local people. I was told by a number of fishers that a public meeting had been called early in the construction process and many fishermen attended to complain about the effects the construction was having on their livelihoods. A fisher, Pedro, informed me repeatedly that representatives of the Stop TKCSA campaigning group had witnessed company staff presenting the list of signatures confirming attendance at this early public meeting in Santa Cruz as evidence of local *support* for the TKCSA. He obviously viewed this as a clear sign that ThyssenKrupp could not be trusted. He brought up this issue a few times while I was in Santa Cruz, always when he was at his most frustrated with the company. It was early evidence for him that the TKCSA was intentionally riding roughshod over the desires of local people. This event had clearly impacted upon Pedro's understandings of the motivations of those people at the helm of the TKCSA and ThyssenKrupp. Campaigning residents also pointed out that they had seen the material the company had used to promote their plan to install the factory in Santa Cruz, and drawings and images of the local area omitted the houses along the João XXIII and the tens of thousands of houses in the adjacent areas of the *Conjunto Alvorada* and *São Fernando*. For these campaigners this omission suggested that the company was trying to cover up the inconvenient presence of its tens of

thousands of close neighbours. This was tantamount to lying they argued, and campaigners claimed this illustrated the malevolent intentions of the company.

Shortly after its arrival the TKCSA caused two critical incidents of pollution, in which metal dust rained down on the district (Caroni, 2011; Porto et al., 2011; Gaier, 2012). Residents recalled this dust reaching ten centimetres deep along the main avenue, and said the company had attempted to control the dust by spraying water onto the street. Residents did not know what this dust contained. The company claimed the falling dust was only graphite and therefore presented no risk to health (ThyssenKrupp AG, 2010), however, the Oswaldo Cruz Foundation's tests on settled dust showed the presence of aluminium, arsenic, barium, bromine, calcium, cadmium, cerium, chlorine, cromium, copper, iron, potassium, lanthanum, magnesium, manganese, neodymium, nickel, phosphorous, lead, praseodymium, rubidium, sulphur, strontium and zinc (Porto et al., 2011). What is important for our concern with mistrust, is that the company's response to their polluting incidents was to downplay its importance, to deny its noxious impacts and to make claims as to what the dust contained that were never publicly substantiated. To the residents of the João XXIII area that I spoke to, the company appeared not to take the problem seriously, and this contributed to the view that the motivations behind the company's actions were tainted by disinterest in the wellbeing of the people that lived near the factory. They expected that those who ran the factory were motivated by profit, and that this motivation was unrestrained by concern for them.

The TKCSA was fined three times for causing punctual, critical cases of air pollution. In August 2010 it was fined R$1,3 million by the State Institute for the Environment (INEA) for the emission of large amounts of particulate matter. Early the next year the company was fined R$ 2,8 million after another severe pollution event, when it was found that it had not adopted the necessary measures to prevent its second blast furnace from emitting further particulate material into the air (Pinto, Trentin and Strautman, 2017). In October 2012 the company was fined once again after another incident of pollution. The TKCSA was asked to pay R$ 10,5 million in environmental and social compensation (Amazon Watch, 2012; Soares, 2012;

Pinto, Trentin and Strautman, 2017). The Secretary of State for the Environment created a working group to evaluate the harm done to the health of the people who had been exposed to the emissions of the TKCSA (Pinto, Trentin and Strautman, 2017). However, residents of Santa Cruz never received any form of compensation, from the fines imposed for these events (Hollowell, 2017; Pinto, Trentin and Strautman, 2017), and the injustice of this was not lost on them. In fact, one campaigner angrily told me that he didn't trust that the company had even paid the fines. He asked why the area had not seen the benefits of the money invested and claimed that he didn't trust either the governmental bodies that fined the TKCSA, or the company itself.

For six years the TKCSA operated without a licence. It had been awarded a Preliminary License in July 2006, and then swiftly afterwards it was given its Installation License (Viegas, Pinto and Garzon, 2014). The factory was inaugurated in June of 2010 and a 'pre-operation phase' was authorised by the State Institute for the Environment (INEA) for 90 days, which was later extended for 210 days. Once this phase had ended the company continued to function under its Installation License (Viegas, Pinto and Garzon, 2014). A Special Commission was created in the Legislative Assembly of the State of Rio de Janeiro to assess irregularities in the State Institute for the Environment (INEA), and other state organs, in the process of granting the Installation License to the TKCSA. Their report concluded that public institutions had intervened in the concession of the license in a manner favourable to the company, presenting its project as viable by downplaying and covering up problems presented by the TKCSA (Rocha, 2013). The company continued to function without an Operating License until 2016, during which time the TKCSA operated under an agreement of 'adjustment of conduct' (TAC – *Termo de Ajustamento de Conduta*). The TAC, in the case of the TKCSA, has been criticised as an extrajudicial tool for environmental organisations to guarantee the continued operation of an industrial project that operated outside the law (Viegas, Pinto and Garzon, 2014). Official questioning of state and municipal processes in the case of the TKCSA continued as Rio de Janeiro's Public Prosecutor's Office brought charges against the previous Governor of Rio de Janeiro, Sérgio Cabral,

for illegally authorising the opening of the factory's second blast furnace (Pinto, Trentin and Strautman, 2017).

The suspicion harboured by residents and campaigners against the company and the state institutions that have supported it, was provoked by the actions of the company and the relevant governing public authorities. Here we have seen a list of objections that local people have had to the manner in which the company was first established and the initial actions of a corporation that were prejudicial to its neighbours. These issues generated mistrust amongst the local population towards the company. This might have been mitigated by the provision of jobs in the area, had these jobs materialised in numbers roughly equivalent to what was promised. The TKCSA originally committed to generating thirty thousand jobs during the construction of the factory, and three and a half thousand jobs for the operation of the steel mill (Rocha, 2013). However, in 2010, the company confirmed it employed only around 300 people from the local area because, the Director of Environmental Sustainability said, it had found a general lack of professional qualifications among local applicants (Rocha, 2013). The jobs that were promised did not materialise (Milanez et al., 2013), and it was certainly the case that the majority of people I met, living on the João XXIII Avenue, and in the local areas surrounding the factory (*Conjunto Alvorada*, *Guandu*, *Chatuba* and *São Fernando* for example) were not expecting to benefit directly from employment by the factory.

There is something more to say about this. It should not be assumed that local people who worked for the company necessarily trusted it. I knew two men who lived on my street who had worked for the company previously. One who had been injured in his service to the TKCSA and lived off the compensation for his injury. He wanted to return to work with the TKCSA, and asked me for help to perfect his curriculum vitae so that he could achieve that objective. However, he described the working conditions inside the factory as 'hell' and clearly did not believe that the TKCSA had been honest about what workers inside the steel mill were exposed to. In fact, he and his wife told me that his friends that were still employed by the TKCSA refused to call him, but instead called his wife in order to speak with him.

They explained that these friends did this in case their telecommunications were being monitored, and in case their communication with a previous employee could be seen unfavourably.

Another resident of the João XXIII area who had worked for the company told me about internal disputes within the company that led to a strike in 2009. He argued that the TKCSA had illegally used public resources by calling the 'Shock Troops' of the Military Police to deal with the strike and remarked that the police had illegally come to the aid of a private company in that case. This neighbour made it clear that some tension, and perhaps distrust, has existed between the TKCSA's management and sections of its workforce. In the light of these two cases, it is important to note that it is an assumption to claim that someone who worked for the company would not have his or her own reservations about the actions undertaken by the TKCSA. Workers at the TKCSA may have distrusted their employers, as any worker may distrust their employer. In the same way, it would be an assumption for me, or anyone else, to claim that all residents and all employees did *not* trust the company. There were many who worked for the TKCSA with whom I did not have the opportunity to talk, and I would not wish to make such claims on their behalf.

As described above, the distrust in relationships was sometimes accompanied by efforts to maintain distance from the distrusted party. Distrust of the TKCSA was also accompanied by sets of behaviours and other, entangled emotions. In the case of the TKCSA, the option of maintaining distance and 'not getting involved' was not available to those who lived near to the imposing factory. There was, therefore, a general distress present in many of the discussions of mistrust of the factory. Campaigners against the TKCSA could frequently become upset when explaining why they did not trust the TKCSA. Folded into this mistrust was a fear or worry about the ways that the factory's neighbours were potentially being impacted, or could be impacted in the future. There was anger that this company should have behaved in such a way as to induce distrust, and anger that the TKCSA could not be trusted to ensure that its neighbours' health and wellbeing

would not be impacted upon through its operation. Often there was a sense of hopelessness that, unlike in individual or relational cases of distrust, the distrustful person could not protect themselves. The company had shown that the factory would do what it would do, and there was little to be done about it. Alternatively, amongst campaigners against the factory I would occasionally detect, in explanations of distrust of the TKCSA, a sense that mistrust fuelled their steadfastness and resilience in ongoing opposition to the company. If the TKCSA couldn't be trusted, then it would have to be opposed.

Conclusion: Mistrust in Santa Cruz

Campaigners' mistrust was not based on a simple tendency towards mistrust in public spheres of life. It was a reasoned reaction to company actions and those of the municipal, state and national governing bodies who smoothed the way for the company's licensing, covering up potential problems and pursuing goals perceived as antithetical to the wellbeing of local residents. Campaigners told me repeatedly they did not trust the motivations behind a governmental emphasis on industrial development, and they resented the use of public money for such ends. They did not trust that the company aimed to do anything other than maximise private profits, and they resented suggestions that the corporation's 'social responsibility' programmes represented anything other than whitewashing their business. The impacts of the factory on people living nearby, and on local fishers and their families, promoted the enduring belief amongst Stop TKCSA campaigners that the company did not prioritise the wellbeing of local people. The irregularities in the licensing process provided on-going evidence for campaigners that they should not trust the company or the public authorities that supported it.

There has been some discussion of whether mistrust is entirely negative in communal life with recent authors pointing out the benefits of mistrust (Gambetta, 2000; Hawley, 2014; Carey, 2017). I do not wish to discuss the relative value of trust or mistrust. Instead, I have laid out for readers an explanation of the development and existence of trust and mistrust in Santa Cruz, which has combined the theories of Brazilian anthropologist Roberto DaMatta, and political

philosopher Russell Hardin. I have contended that the conceptual segregation of life into two opposing spheres (DaMatta, 2007) is not sufficient to explain the distrust I witnessed in the João XXIII area of Santa Cruz. Instead, while trust may be built through long-term caring relationships, typically developed in and around the home, distrust is also based on previous experiences and expectations of motivations and behaviour in the context of previously held understandings of the world (Hardin, 1993). This allows us to explain why distrust can also be found in the home; in close family relationships and intimate and sexual partnerships. Thus distrust could bleed through different 'spheres of life' from the home, the street, work and in relationships with institutions; to the extent that we might question any clear-cut separation between these 'spheres'. It also has the consequence that I am able to take seriously the claims of the people with whom I lived and worked for more than a year. I hope that it has meant the presentation of an account, which does not let anyone off the hook. The impacts of the activities of drug traffickers and the militia are identified and properly incorporated into this theory of mistrust, as are the actions of a large corporation and the public authorities that have supported the TKCSA.

The mistrust I witnessed was based on judgements of previous behaviour and expected motivations. In interpersonal relationships it sometimes surfaced as a kind of reigning in of the self, to not get involved, to avoid unnecessary sharing of other intimate emotions and to guard against vulnerability. Distrust of the TKCSA was also based on judgements of the actions and motivations of the company. However, in the case of the distrust of the TKCSA, distrusting individuals could not feasibly distance themselves from the factory. The alterations to behaviour and the types of physicality associated with distrust in dyadic relationships, then, were also not feasible. Instead, mistrust of the company surfaced as, and led to, worry, anger, hopelessness, defiance, and a sense of steadfastness of opposition.

The aim behind this section of this thesis has been to increase our understanding of mistrust as it occurs around the TKCSA in Santa Cruz and to integrate this into our perspective on local opposition to the factory. It has also provided a detailed

background for a further discussion of what it is to live with industrial pollution and the environmental conflict that surrounds it. The following chapters, in the next section of this thesis, will go on to build upon this section by looking into the emotions involved in understandings of pollution and its impacts, in the campaign against the TKCSA and in the environmental conflict in Santa Cruz, more generally. The next chapter documents the complaints most often voiced against the factory in the immediate area surrounding the steel mill.

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Section 2. Emotional-environmental conflict

Chapter 7. Complaints

Introduction

I have already discussed some of the complaints about the TKCSA (see Chapter 6). These included complaints about the way that the national and local authorities granted permission for the location of the TKCSA in Santa Cruz, the way that the consultation process was undertaken, the use of public finances to effectively subsidise the steel mill, the problems associated with the construction of the factory, the critical polluting events caused by the TKCSA and irregularities in the licensing process. I have focused so far on complaints that refer to issues arising early on in the process of the installation of the factory and events occurring soon after the beginning of the TKCSA's operation. I will now move on to discuss issues that emerged later on, or that were ongoing.

In order to present these complaints, I rely primarily on interviews and conversations I had with people living close to the factory. This section will make use of a substantial number of excerpts from recorded interviews as well as small snippets from conversations I have later transcribed from memory. In some cases where I have shorter quotes or no direct quotes, I report my understanding of what was said. The purpose of this chapter is to inform readers of some of the perspectives on the impacts of the steel factory, centring the opinions of people with whom I spoke. I also refer to some epidemiological research that is relevant to the claims made by factory neighbours. I rely, too, on my own experiences and place the data in the context of my wider understandings of the situations I discuss. In this chapter I use photos to further illustrate the opinions and experiences of interviewees. Finally, my conversations with those people who felt that the presence of the TKCSA had been prejudicial to them were quite undirected and unstructured, and as a result, many of these dialogues swing from one topic to

another. I have chosen to present these complaints under the following headings; housing, dust, breathing, skin, allergies, other health problems, illness and death, fishing, floods and 'nature'. I feel this categorisation follows closely the described impacts of the steel mill in everyday life.

Housing

The Avenida João XXIII runs along one side of the perimeter of the TKCSA. It is a long road stretching from the main train station of Santa Cruz to the São Fernando river. I was informed that it used to pass over the river to Itaguaí, the first area outside of the city limits, until the factory closed this access out of Santa Cruz. In the interviews and conversations I had with people living on the south side of the Avenue, I came to understand that since the TKCSA was installed, serious cracks had appeared in the structure of their houses. The houses on this side of the Avenue back on to the train track at the outer edge of the factory grounds. They are just meters away from the factory's fence. Residents here generally argued that these fissures opened initially during the construction of the CSA. However, they affirmed that even after fixing cracks, others appeared regularly. One woman pointed out the cracks in her house, insisting that I should take photos of them. She said, "*All this is cracks, all this here. I live covering up the cracks of the house. We keep covering them up. You only have to look to see how it is.*" I have included a photo (below), which is representative of the typical sort of crack I was invited to inspect in the many houses where residents claim that there had been structural damage to their homes since the factory was installed. In most of these conversations there was a sense of annoyance or an indignant feeling that this had been allowed to happen as well as a feeling of concern and worry about whether or not these cracks could get worse or have further structural impacts on their properties.

Figure 4. Cracks on the inside wall of a house

Many of the same residents reported that the trainline that buttresses their properties also caused discomfort in their everyday lives within their own homes. The train generally pulled a long line of open-topped carriages carrying a dark mineral material piled up high (most people told me it was coal). In conversation,

people were concerned about dust emitted from the train (I discuss air pollution below), the possibility that the vibrations from this train caused or exacerbated cracking in their houses, and the noise pollution that the train caused. The train regularly emitted a loud noise that echoed throughout the local area. I could often hear it from within my house a couple of streets away from the Avenida João XXIII. People complained that the noise and vibrations from the TKCSA's train negatively affected them in their homes. One woman told me, "this train there, it doesn't let us sleep. The train goes by all night and it hoots up there, and it prevents us from sleeping through". Another resident explained, "it is a noise that comes from nothing, it doesn't allow us to rest. At night the train passes by this way and that. God forbid. The train, it doesn't let us rest. God forbid." The idea that the vibrations, dust and noise coming from the train line prevented rest was a common feature of these conversations. One woman said "we don't manage to sleep at night, because my house is right next to the CSA. So we are suffering a lot".

Dust

I have previously detailed the critical incidents that occurred soon after the opening of the TKCSA (see Chapter 6). Here I aim to clarify that these incidents were not understood to be isolated events. The ubiquitous presence of a kind of shiny metal dust in people's everyday life, in their houses, on their clothes, on their cars and on the streets, was regularly mentioned to me. In my interviews and conversations with neighbours and friends it became clear that local people were very aware of the presence of particulate matter in the air. It was referred to as, 'powder' or 'dust' (*pó and poeira*), 'iron dust' (*pó de ferro*), 'black powder' (*pó preto*), 'grey dust' (*pó cinza*), 'glitter' (*purpurina*), 'silver glitter' (*purpurina prata*), 'soot' (*fuligem*) and 'silver rain' (*chuva de Prata* and *chuva prateada*). This dust was, in my experience, always associated with the TKCSA. Many conversations about the dust were accompanied by attempts to show me the dust in our surroundings. Meticulous efforts were made to make me aware of areas of dust in peoples' houses, focused particularly on shiny particles and black dust. Below is a quote from a friend who pointed out a dusty area in his front yard that he explained was due to the CSA. He

took care to explain the difference between the 'earth' that had accumulated on his front terrace, and the dust that came from the CSA.

"Olha, there, that corner there, are you seeing that? That black stuff there, that isn't earth, não cara. That is some of the black dust that falls and ends up here. This here was all black also… Here, ó, the earth here and the black stuff here, there is a difference. Look here, ó, ó [pointing]. Everything is from there [pointing to the factory] all this that stays on top of our roof. This here, white stuff here is sand, and this black here is the chemicals that fall from the TKCSA on top of our rooves, and when it rains, it comes down and stays on our floors. And we are living like this!".

To show the quantity of dust that there was in their houses, interviewees would often run their hands over the furniture and surfaces available, or indicate the amount of dust accumulated after wiping a table or sweeping up dust from the floor. One neighbour said,
"When I sweep the house, I throw away that dust. The floor can even be shining. Aí, I get together the mountain of black dust, I look at it and say – 'my God! What a mountain of shining dust…' When there is that wind, sometimes it is windy here, no? The dust gets together, that comes from there, and together it goes onto our veranda. Aí when I start to sweep it gets like this. The cloth I use to mop the floor, the cloth was white, white. And now the cloth is black. You can wash it, when it is black, it doesn't get clean anymore. The dirt stuck to it. The furniture, when you wipe your finger on it, when you look, it is all full of dust. The dust attacked everything." This woman informed me she had swept her floor that morning, and then asked me to take a picture after sweeping a small section of it again (see below). This was a common theme; that the house would have to be cleaned repeatedly during the day, to ensure that the dust didn't accumulate too much.

Figure 5. Dust swept up during an interview

Another woman claimed that, "we have to adapt, there is no other way… You can see that wherever you go here, it is dusty. You clean the house, two, three times and the dust continues.". Below I include a picture that illustrates the amounts of dust that was collected by wiping a hand along a surface, which had been cleaned various times already that day.

Figure 6. Dust wiped up during an interview

Some people I spoke with explained that the dust increases during weekends. One
woman expressed this in the following manner. "I don't know anymore what we can

do. The pollution continues. Really a lot of pollution. On Fridays, Saturdays and Sundays, when there is no-one to check? That is when they open up their furnaces and the pollution is doubled. It is doubled… Everyday there is pollution, every day. Now, Saturday and Sunday? It is worse."

I went to the house of a person I met through one of the Stop TKCSA campaigners. He showed me plants covered in dust in his front yard (see picture below). The plants' owner confirmed that he and his wife regularly cleaned all his plants, wiping each leaf with a cloth.

Figure 7. Dust settled on the leaves of a plant in the garden of an interviewee.

People I conversed with, living in the João XXIII area, often informed me that the dust that fell locally, when the TKCSA first began to operate, was formed of larger particles and that it had been more visible at that time. In my interviews it often

came up that, since the polluting events for which they were fined (Kato, 2013), the TKCSA had installed a filter. However, a common complaint was that the dust continued to fall despite the filters. A friend said, "…they say that they put on a filter, but for me it isn't working. I don't think it helped. There is no point in the filter that they put in. The pollution continues anyway".

One woman explained how the dust had a particular impact on clothes and sheets. "The clothes that we put out on the clothes line? It is unbearable. You can't wear the clothes. You have to wash it again, because it is full of dust. It's too much dust. And if you wear it? It tickles your body. What if, on top of that, you leave your bedroom window open? When you look at the bed, like this? It is full of silver dust. It's too much dust. Aí, would you lie down? Rolling around in bed? It sticks. It looks like fleas".

Many people claimed that the dust they encountered since the installation of the filters (Alo Comunidade!, 2012c) in the TKCSA was now finer, smaller and perhaps had changed colour. Some expressed concern that this finer dust would be worse for their health because it was thought to be more easily breathed in.

"Before it was a glitter that fell but it didn't do as much damage. And now it is this black dust that you pass over your hand and it is all black, it never gets clean and we inhale this. Então, there are people with respiratory problems and then it gets worse. This is killing people and it kills people slowly. Understood? Slowly. There will be no turning back. Then that's it, entendeu? The pollution – there is nothing we can do to make anything better. Here at home, thank God, we have no problems. No one. But it is today that we don't have problems. But, I don't know in five, ten years, how will we be, got it? If it's going to affect us, it can affect the lung, because we're inhaling it, you know? ... "

In much of the literature about the impacts of particulate matter suspended in the air, it is argued that the size of the particulate material influences the extent of the potential damage to the cardiopulmonary system (Valavanidis, Fiotakis and

Vlachogianni, 2008; Franck et al., 2011; Amatullah et al., 2012; Kim, Kabir and Kabir, 2015). With some studies showing that ultrafine particulate matter can result in more serious impacts; leading to hypertensive crises for example (Franck *et al.*, 2011) and effecting cardiac function (Amatullah *et al.*, 2012). Smaller particles are able to infiltrate into systemic circulation and thus extend beyond the site of deposition in the airways (Amatullah *et al.*, 2012). In a few interviews people were also concerned about particulate matter that couldn't be seen as well as gases. A friend relayed to me that he was concerned by the continuation of emissions with a smaller particulate size. I found that many people were worried about what they saw as a reduction of the size of the dust, and about gaseous substances that they might not be able to see.

Breathing

Difficulty breathing was a reoccurring theme in my conversations about health with people living in the João XXIII area. Many people described a 'lack of air' and explained the problem as though it were to be located in the air, not inside the body. In this sense the issue is described as a lack of breathable air in the surrounding environment rather than an internal problem with the functioning of the lungs. Considering how common this complaint is in the local area, one can understand this type of characterisation. In some conversations I had, people affirmed that the physical force needed to breathe properly caused lung pain. One woman explained that she and, she thought, her baby, experienced this daily. While gesticulating at her sides and the upper part of her back, in order to illustrate its place and intensity, she described the pain associated with breathing.

"I have this problem, it is a respiratory problem, and he also has it [her baby], it is the air around here, I think that it is so heavy, this business of the metal, the ore, and these things. I sometimes wake up, and I don't smoke, no, but sometimes I wake up and it seems as though I have smoked the whole day and my lungs are aching a lot. I can't breathe. I feel a lot of pain in the lungs. I go to breathe, I make the effort like that, and it hurts. As if it were heavy, you know? As if I had smoked and we have to spend the entire day doing nebulisation, he and I"

I discovered that this complaint about the 'lack of air' was very common in families living in the João XXIII area. Many I spoke with had bought or acquired medical equipment, such as nebulisers, with the aim of treating themselves at home. One friend said this,

"We worry, we worry, we can't do anything except trying to give him comfort, ne? and protect him when he breathes. We always have to do nebulisation with him. Constantly, constantly, nebulisation. Nebulisation is a type of business of oxygen, that we put saline solution in, entendeu? Nebulisation means a device that comes from the doctor at the clinic. And the doctor, ne, what happens is, she sends a paper, in writing that that is what we have to do. That if not, we have to take him directly to hospital, and so as not to keep carrying and taking him when he has a lack of air, ne? It is because of this here [points to the factory] that he ends up with a lack of air. Ai we, every night, we had to do nebulisation for him. Nebulisation is that kind of steam from, how can I explain it, that kind of steam that comes from the saline, entendeu? I met a lot of people here in the area that have it… Many children here have it. The majority were worried and bought it too. Including the neighbour next to us. We used to lend it to her, ne? For her to use, and now she brought one and she has it."

It appeared to me to be common for households to own a nebuliser for use primarily with children. This was either regularly used (for example before going to bed) or was used in times when children appeared to parents to be experiencing difficulties breathing.

A friend of mine gave a speech at an event in Santa Cruz. She explained, "today, we are breathing this steel dust, this cement dust, and we have very grave health problems, very serious health problems. Like my sinusitis. Before I never suffered with anything, nothing like I have today. I have never passed through such difficult moments in my life before."

Skin

Amongst the common complaints that I heard while in the João XXIII region of Santa Cruz was a repetitive reference to dermatological issues. Many said they suffered from itching and irritation on their skin, drying skin, general skin discolouration and a type of repeating dermatological eruption resulting in small white spots. Others explained that they suffered from short-term rashes that appeared after leaving the house. One couple explained that the skin irritations occurred because the dust in the area was inhaled, and the poisonous substances were then expelled from the body through the skin.

One woman showed me the dried skin on her legs, paying particular attention to cracks in her skin, which she attributed to the TKCSA. She argued that these cracks caused her discomfort and embarrassment in her day-to-day life. She said, "this pollution, I got really bad ... I dried out a lot, my leg was all dry. Now it came out, it got really ugly ... I was ashamed to go to a manicure, to do my nails. Now it's better. But it got really bad". Another resident spoke about the discolouration to his skin, "So in the body, I ... even those little spots that I didn't have. Those little white spots that I didn't have appeared on me. Do you want to see? A lot of spots. So, these things, I didn't have that. It appeared here. Here ó, I didn't have that ... I
didn't have that. It is full of spots. All white, ó, ó .... There are a lot of marks. "
Another woman had similar complaints about white marks on her skin. Please see below a picture of these marks.

Figure 8. Dried skin on an interviewee's leg

While I was accompanying a health visitor, a father living in the Conjunto Alvorada explained that his daughter suffers from a repetitive skin rash. He said, "Still it [the dust] falls. It's like this, shiny, like that, like dust from a stone. And I also realized that my daughter has this now, she didn't have it before coming to live here, she didn't have it. Like some spots there on her body, on her skin. As if it were some little insect that bites, aí it itches her and they end up in little balls. Some marks must have been left. Are you seeing that, ó?... She says that it itches, né? She scratches and the wound comes when she scratches like that… Before coming here to live, she never had this". In this conversation this man explained that this worried him, because he did not know what it was, but he felt it was not 'normal', or 'right'.

Still others told me of some short-term dermatological reactions that occurred after leaving the house.

"It was yesterday at the time I left here to Miessimo by foot. I put on my jean shorts and my legs, up the back went all like this, like measles. Full of little balls… Aí these, like acorns only came up on my legs, where I was exposed. It was horrible. Yesterday it was horrible. Yesterday was horrible. It itched a lot. It seemed like there had been a thousand mosquitos biting me. It was the dust from the CSA. This dust is full of mineral dust, there are times when it is full of this mineral business. If you put a magnet to it, it will stick to the magnet. The mineral sticks and everything. The steel. Yesterday my legs were horrible, from the knee down, it was unrecognisable. It wasn't a leg, it was rubbish. Hmm. God forbid… I went by foot from here to Miessimo to resolve a problem. Soon after I feel my legs itching, my legs itching, and yes I can stick my nail in, olha it was full of what looked like measles, it looked like a person who had measles - measles only on my legs ... And my legs got horrible ... Look here, from how itchy it gets. Do you see? It itches ... Then I stuck my nail in here and here. It is so itchy. It is sad. It's like a burn né? It looks as if it were all burning. It is still marked here, still."

Complaints about rashes, irritation and changes to the skin were common amongst those people I interviewed. There is evidence that air pollutants, and particulate material, can contribute to cutaneous damage, such as skin ageing, inflammatory or allergic skin conditions including atopic dermatitis, eczema, psoriasis or acne, and skin cancer (Drakaki, Dessinioti, & Antoniou, 2014; Kim, Cho, & Park, 2016). It is, then, unsurprising that skin issues came up when individuals discussed the health impacts of pollution.

Allergies

Many people associated an increase in the severity and frequency of allergic responses, with the air pollution in the area. This was a topic that was regularly brought up. A woman I interviewed explained,

"Ah, I, sabe, I get like this, I started to have burning in my eyes, a burning in my eyes, my nose running a lot, a burning in my eyes. A lot. There was a time, assim, that I started to sneeze, I even got annoyed with myself, it was like twenty sneezes

in a row. And the headache. Headache. My eyes seemed… the pain got like this here [points to eyes and head]. And with the pressure, with the burning in my eyes, my eyes got inflamed, and puss started to come out. Puss from my eyes! Aí, I went to the doctor in Itaguaí, because here there isn't one, ne? Aí I went to the polyclinic in Itaguaí. I had to pay to see him, but he is cheap. Aí, it was within my budget to see him. I had a consultation and the doctor said to me, 'Olha, you have a very strong case of allergic rhinitis. Where do you live? You live where? Because the way that you are, and your eyes are very inflamed'. He gave me eye drops, that made me cry, and burnt my eyes. But he said, 'you have to use this. This inflammation has to stop'. Then I spoke to him like this, 'I live in Santa Cruz, I live near to the CSA'. He said, 'that explains it. Olha, you will have many problems and many residents will have'… I have many problems, I sneeze a lot, my nose did this, it drops water, and I did this and skin came out of my nose. Skin! That burned so much. My nose was running so much. I said, 'Doctor, I sneeze more than twenty times at once. I can't cope anymore, and I have this running in my nose constantly, that dripping. I already took the syrup, and nothing. I have this burning here, and this here is all painful, I have a headache and I stay like this'. The doctor said to me, 'you have this problem of allergic rhinitis, it is very serious'. And I said to him, 'I am treating my eyes too'. He said, 'well, yes, this is all allergic rhinitis. It attacked your eyes, it attacked your airways, it forces your eyes, it is where the dust caused inflammation, it must have entered inside your eyes, they got inflamed, né?'. That puss that came from my eyes dried up, but now they leak water, but the irritation continues. My eyes continue to be irritated. Aí, he gave me the medicine for the allergic rhinitis".

Some people relayed to me that the sensation of having allergies associated with the dust emitted from the factory was like having a constant cold or flu that wouldn't get better.

"I have a sniffling that doesn't go away. I am allergic to the dust, entendeu? I have this sniffling that doesn't go away. Sniffling is when you seem like you have a cold. It is allergic rhinitis. Whatever you breathe, you sneeze [imitates sneezing] and I

get like this [makes a noise with her throat, with her fingers in her ears]. And it doesn't go away. But if I don't do this, then I don't stop sneezing. Entendeu? Sniffle, sniffle. It is a runny nose that is always there, entendeu? Every time there is dust, it comes. It doesn't give a fever, you can't take medicine because it is constant. It is like that in me, it seems like I have a cold. I live like this."

It was common to hear complaints about the ways that the pollution was thought to affect eyes and eyesight. Here is an extract that illustrates the sort of thing that was said in interviews, about the impact of the steel mill's pollution on local peoples' eyes.

"Our eyes just, they just drip water, it burns, and this is because of this business of the CSA. You put water on the outside… your eyes get a little, like… burning. Burning eyesight because of them there [points to the CSA]. Your eyes get like, how do you say, burning. Your eyes burn, and then it comes out of the eyes, you know? Already, they are burning the eyes. This business of the eyes like that, is definitely from the pollution from the CSA. It is because of the pollution of the CSA. It is only that, it is that only."

Other health problems

There are various other impacts which were discussed by people I spoke with around the TKCSA. Occasionally, for example, I heard complaints that the electricity pylons, which the TKCSA had installed to connect the factory with the national electricity grid. It was thought these caused fatigue and aches and pains around the joints. Another health concern which I encountered was that of unexplained, repetitive nose bleeds. I interviewed a woman who told me that she had been having nose bleeds since shortly after the TKCSA opened. She said, "it was when they started to use the furnaces and the heavy metals that it started with our health getting a bit debilitated. I, it is what I'm saying, for me, it is something like eight years, or nine years that I have started to bleed [from the nose] constantly, it is night and day… It comes out a lot. Let's suppose, I am eating? If I have my head lowered and I am forcing? When I see the blood coming down through the

nose. Or, no, when I am sleeping? I've gone up calmly to sleep. Then, with the dawn, I feel that warmness on my face. When I look? My pillow is full of blood. I have to go down to put ice on it. I lie down putting ice on it. Aí, it gets better. But it never stays fine, I don't have a way to make it better. It gets better, like, for half an hour. Then I go back to sleep. In the morning, at six or seven o clock, it starts to bleed again." She added that, "I went to the ophthalmologist[24] in the clinic, and he sent me to get an x-ray of the face to see the cause. They didn't find anything. They said it was simply an irritation from allergies. But an allergy from what, if my house is all clean… I never had a problem with bleeding. I check my pressure… I don't have pressure to have nose bleeds. The nose is fine, the head is fine, the heart? I did an electro, I did an echocardiography, to see if it could be in the heart. And it isn't." This woman told me, "It makes me very nervous… Because I live alone, my son doesn't live with me, and I feel nervous, bleeding like that from early morning, and I ring my son, I get scared, and he wakes up, desperate, and comes running here, and I say, 'no, I'm going to get better, I'm going to get better… So, I get very worried about my health".

These are examples of other health problems I came across, which people I spoke with attributed to the presence of the factory.

Serious illness and death

There was a relatively common association drawn between the pollution associated with the TKCSA and serious illness and unexplained deaths in the area. For example, the nurses I interviewed in the local health centre claimed that the number of cases of cancer had significantly increased since the TKCSA had begun to function in the area. One nurse explained,

"I saw an increase in cancer in my area. I can talk about my area. In my area it was impressive. And in Carla's area there were many. From last year to this year, it has been an explosion of cases. There are 4 cases there of breast cancer, lung cancer and thyroid. I think that it is lung cancer which is leading. I am speaking

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[24] This woman said she saw a doctor specialising in eye disorders for this problem.

about cases that are increasing in my area. The cases that are increasing in my area are these ones."

Local people I interviewed associated deaths, for which no clear explanation had been given, with the pollution from the TKCSA. One resident explained to me, "Here it was a place of peace. You could see that the air was pure and we stayed here and were very tranquil. And after the arrival of the TKCSA, that is when all our problems commenced… Before there wasn't this problem with health. Now, in the last fifteen days we have buried a neighbour in our road, of thyroid cancer, which is the cancer which is coming up the most here."

And another neighbour also confirmed that it was the case that there was an increase in deaths since the factory was inaugurated. She claimed that, around the time of the interview, lots of people were dying, either with or without a specified cause. She argued that this could be associated with the presence of pollution associated with the TKCSA. She explained this to me in the following manner, "Olha, many people, people from here, already left. It was one after another. It has been ten months since my sister went – from nothing, she died. It is ten months since she died, now. From nothing it was. It was this business of the lack of air. Ask your colleague because he knows about this. What I know to say is that this business of the lack of air. There is a lot of lack of air, and it happens very quickly. She was in the UPA[25] one day with a problem that she couldn't get enough air. Ai, they were treating her, for pneumonia, and she didn't have anything like pneumonia. She didn't have pneumonia. This business of the lack of air is everything here. From nothing it is affecting everyone like this. So, it was Julia that died, then a little later it was another, Luzia. A little later it was another one, the sister, Cristina, she was my sister's neighbour. It has been a week since Cristina died. Ai, it has been, I think, a week since Senhor Gláucio died. It hasn't been even two weeks for him too. Because Cristina, in the day that Cristina was buried, Senhor Gláucio was also buried. Very quickly, assim. Very quickly, from nothing. From nothing. The air of the person finishes, the person's air stops and the person dies. It was from nothing. Senhor Gláucio was there in the road, there, look. And

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[25] '*Unidade de Pronto Atendimento*' or Emergency Care Unit.

from nothing, he died. Hmm… Because there is no way – they are without air, with this pollution there, ne?". This woman added that, "We worry, ne? We worry a lot." Her husband lightened the mood with the question, "Do you want to buy my house?". He laughed at his own dark humour.

Floods

The TKCSA was constructed in a swampy area that used to incline towards the Sepetiba Bay. I was told by members of the campaign group *'Pare TKCSA'* that the company elevated the ground beneath the factory, in its initial construction phase, creating a basin like area to one side and to the north of the steel mill. ThyssenKrupp CSA also redirected the Canal São Fernando during its construction (da Silva, 2019, p. 12). The reduction of the flow of the Canal São Fernando, which enters the factory ground, combined with insufficient drainage caused a number of floods since the factory was built. The São Fernando area, wedged between the Conjunto Alvorada, the River São Francisco and the canal to its southeast, was particularly hard hit by floods. A member of the Pare TKCSA explained, "It was more than 22, 23 floods. More! A lot more!... Every year we were having four, five, six. There was a period, if I'm not wrong I think it was 2011 to 2012, from the 8th of December to the 11th of January, when there were eight floods. I mean, in a period of practically one month, eight floods. So, that isn't one flood per year. It is various per year. Various! There was a week when, with the sun shining, in the way it is now, you see? It flooded, it flooded two, three times. And at the end of that week, there was a flood that lasted a few days, and one that lasted a week, with the whole house, with 1.2 metres of water. All the furniture!... and the water didn't leave. We had to leave. We are always under the water around these dates, we are always below water. Imagine what a Christmas is like when you have a flood in your house. The new year, that is a commemorative time, a time for familial integration, everyone beneath the water? Easter, I have a sister who doesn't live here, and she came to visit me. She had to leave, with the water licking her knees, because there was a flood that day that she had come."

As part of the Conduct Adjustment Agreement (TAC), which was put in place to address irregularities in the conduct of the TKCSA, the company was required to implement a study to assess its responsibility for the floods in São Fernando (Conestoga-Rovers e Associados, 2013, p. 279). A report, conducted by the company Conestoga-Rovers, was commissioned by the TKCSA, in 2013, to assess which of the required measures of the Conduct Adjustment Agreement had or had not been completed. This report is no longer available online, but it detailed that, by 2013, the TKCSA had not completed such an assessment (Conestoga-Rovers e Associados, 2013, p. 279). The findings of this study were to be made available to the public, but during my time in Santa Cruz in 2014 and 2015 the people I knew in the area had not had access to any such study. While still denying responsibility for causing the floods, the TKCSA provided drainage mats and pumps for São Fernando and, together with INEA, built a sewage treatment centre in the area (da Silva, 2019, p. 12). I was told repeatedly that many residents of São Fernando lost many belongings in these floods and although attempts had been made to exact compensation from the company, no compensation had yet been obtained by the time I left the area at the end of 2015. In these conversations much lap slapping, sighing and head shaking occurred. These were common signs of frustration, indignation, anger and resignation that went alongside most discussions about the floods.

Fishing

The São Francisco River is part of the Guandu water basin. It runs along the western edge of the western residential areas of Santa Cruz. The river has long been crucial to hundreds of fishermen and -women whose livelihoods depend on it. The amount of fish available in the area was thought by fishers to have drastically reduced since the TKCSA was first installed. Some argued that this process had begun with the construction of the factory. They explained that vibrations from the build had disturbed the fish and already, at that early point, fish had begun to avoid the area. The factory established a restricted area where fishing was no longer permitted around the TKCSA's newly built harbour and fishermen also claimed that a large area of mangrove forests was destroyed during the steel mill's installation

(Lepercq and Norris, 2016). Areas surrounding outlets from the factory into the river were pointed out to me when on boat trips with fishers, and it was thought that these were tubes carrying chemical waste which polluted the water.

Evidence has suggested that industry has contributed to shortages of fresh water, as the TKCSA used river water in its steel plant (Defensoria Pública do Estado do Rio and Janeiro, 2015) and we have discussed above the claims that the factory construction altered the water table, reducing the flow of the river and creating a basin-like area by elevating the ground under the steel plant. Fishermen claimed that this caused, or at least contributed to, the intrusion of salt water into the river. Many local fishermen told me that, together, all these changes to the coast, rivers and canals have diminished the amount of fish available, and their ability to make a living by fishing. One interview I had illustrates neatly the varied ways in which the TKCSA impacted on the amount of fish available.

Fisherman: *And now, in relation to the river, the fish practically finished. Because, in the first place, you know that if one hits on the boat, it hits the water and the fish disappear? Here there was more than, I calculate, some six pile drivers, you know what pile-drivers are, yes?* [the fisherman makes the noise of a pile driver]. *Here, when you hit the water the fish disappear, and that pile-driver, when it bangs, it shakes the surface of the water and the ground, and the fish go away and don't come back. Constantly, constantly, day and night, constantly working, and the fish go away.*

Delia: *This was when they were building the TKCSA?*

Fisherman: *Since then, the fish started to disappear, from that time.*

Fisherman: *And the waste also from those tubes. Chemicals come from there, residues, heavy chemicals ne? And everything there inside, there are about three or four big tubes of those, that exit inside the river. This also kills the fish. They all go away. Crayfish, you could get half a kilo. Crayfish of this size here* [gestures a size]. *Now you don't find them anymore. There aren't any more crayfish. There isn't the necessary*

	fish. And the crabs too. They disappeared too, there are very few of them.
Delia:	[do you fish] *Here in the bay? Or in the river?*
Fisherman:	*In the river. I always liked to fish in the river because of the mullet. And the mangrove also finished. They tore down a part of the mangrove, I don't know but I think IBAMA[26] fined them for that, ne? They tore down half the mangrove, the crabs disappeared too. There used to be crabs. We caught crabs too.*
Delia:	*Were the crabs in the mangrove?*
Fisherman:	*Yes, the crabs were in the mangrove.*
Delia:	*Because they* [the TKCSA] *say that they look after the mangrove, because there is a part of it which is there still, no?*
Fisherman:	*There is a part which is still intact. But there is another part which they messed with, which is where the gas passes by, ne? And there, we used to catch shrimp in that time, there was shrimp, twenty kilos. Every time we went fishing, we fished two hours and caught twenty kilos of shrimp. It was a lot of money. Also, they put the gas on top of where the shrimp procreate, where the shrimp mating happened. They made that gas there. Their development [the TKCSA] encompassed that area, I don't know the size, but it was big. Nowadays you can't catch any more shrimp, there isn't any anymore. And if you went there below the pier and the gas, they prohibit fishing there.*

In a separate interview one fisherman told me, "I am a fisherman, I mean, 35 years, ne? I live here, and since 1980 that I fish in this river, and out to sea, the Sepetiba Bay… Aí, before, I got my livelihood from fishing alone. There were a lot of fish. In this time, we, it gave us enough to pay our bills, look after our children, it was all here, by the river… We killed 100, 150, 200 kilo, 400 kilos. In 5 or 6 hours, we killed this, aí. These days we spend all night to kill just half a box. Last Saturday I only managed to get 4 mullet and 2 Leatherjacket fish… Here it was always good for fishing. And after they put that CSA there, it finished."

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[26] Brazilian Institute of Environment and Renewable Natural Resources (IBAMA)

Further tension arose between the company and local fishermen over a barrier that was built across the São Francisco River. The barrier was constructed by the Association of Companies of the Industrial District of Santa Cruz and Adjacent Areas (AEDIN) (Defensoria Pública do Estado do Rio and Janeiro, 2015), of which the TKCSA was the largest company.

Figure 9. Barrier built across the São Francisco river.

ThyssenKrupp Companhia Siderúrgica do Atlântico claimed that the barrier would preserve the local fauna and safeguard the navigation of fishermen by elevating the water level (Alô Comunidade!, 2015). AEDIN's plans for the barrier were linked to the "water crisis" and the need to protect the water supply for the residents of Rio de Janeiro (Corrēa, 2015). A legal case brought against AEDIN stated that the reason behind the barrier's construction was that water shortages had disrupted industrial usage of fresh water (Defensoria Pública do Estado do Rio and Janeiro, 2015). Whatever the reason for its construction, fishermen argued this barrier

critically restricted fishing activity, leaving them unable to work and experiencing severe financial difficulties. Firstly, it was argued that the barrier had created a dangerous situation for fishermen. The barrier crosses most of the river, leaving a small gap in the middle, through which fishermen are expected to pass. This formed hazardous currents around the gap that caused accidents, damage to boats, and injury to fishermen. After the construction of the barrier a small boat was stationed at its edge to aid fishermen passing through the gap. I was told repeatedly that this was insufficient.

I conducted a series of interviews with fishermen around the time the barrier was being built as I was asked to document the issue by a fisherman who had been involved. In one interview a fisherman explained, "when we try to pass the barrier, there is no way to pass… It gets very dangerous. Including if the tide is very low, it is more difficult for us to pass by the barrier because the difference in the level of the water on one side and the other, is more or less, almost a meter in height. So there is no way we can pass by boat." Another fisherman said of the barrier, "They put this barrier there, it is now that it really got worse. Because now we don't have the conditions to come and go. That small boat that transports us from one side to the other, it doesn't always transport us. It doesn't go because it conditions aren't right. And what if something happens? There, there is a strong current, entendeu? And the fish aren't coming up, because of the type of thing it is, there is no way that fish can come up there. There is a lot of water pressure, and put a barrier there, and there is no way… This is directly harming us."

Another fisherman explained that, "with that barrier there, the fish don't enter [in the river] to lay their eggs… Mullet and sea bass, they lay their eggs in fresh water. They come from the salt water, and they enter into the fresh water to lay their eggs." It was thought that fish numbers were reducing because of these restrictions to their movement and that fish were not coming up river to enable fishermen to catch them there. These new difficulties added to the problems which had developed for local fishermen alongside the installation and operation of the TKCSA. During my time documenting this issue there were a few protests.

Figure 10. Fisher protests against the barrier, claiming 'the right to come and go'.

At various times during the construction of the barrier, the local fishermen attached their boats to it, using their physical presence to halt its construction, with hand-made signs claiming the 'right to come and go' as established in Brazil's Federal Constitution. There was a palpable sense of anger at these demonstrations. During these protests AEDIN negotiated with the fishermen, the maritime authorities ordered those who didn't have life vests to leave, and the military police removed them from site without charge. Shortly before I left Santa Cruz a crane was installed at the side of the barrier in order to lift the fishermen's boats out of the water and move them from one side of the barrier to the other (Instituto PACS, 2016a). Shortly after I left Brazil, in January 2016, the barrier broke under water pressure which caused flooding in properties near the river.

'Nature'

In various conversations and interviews I had with friends, and friends of friends, in the João XXIII area, they told me that they felt a loss of a previous style of life. This was often verbalised as a loss of 'nature' and access to nature, a loss of free movement in nature and a loss of personal time without corporate influence over private life.

"I am going to say that when we moved here, ne, we didn't have skin problems, the children had more ability to play in the street, but, you know, without having to, I don't know how to explain it you know, but like, we had more smell of nature, of the sea. We had animals here behind us, entendeu? The children played freely here, kite flying, things like that. There were more animals, there isn't now as many as there used to be. I think that this is what I can say, understand? This firm arrived, with this business there of the dust that they make, those strange fumes there, entendeu? It is causing a lot of problems for a lot of people."

Many interviews documented changes in the natural landscape around the CSA. I was told that there had been an abundance of animals, birds and insects where the TKCSA was positioned. The animals had disappeared with the installation of the TKCSA; either dying or moving to the residential areas around the factory. One example people gave was the increase in mosquitos in the areas around the steel mill. Where I lived people would sit outside their houses to escape the heat, hitting their legs continually with cloths, with the aim of warding off the mosquitoes. Other tactics for keeping the mosquitoes away included burning cardboard egg boxes on the floor nearby. A friend explained, "After the CSA came there the mosquitoes stop here… They are taking the mosquitoes natural habitat. Where will the mosquitos go? Even in this the CSA… It is true, it finished with the jacare, the capybara that were there, it is all now here. The mosquito still proliferates a lot, now there are few armadillos, capybaras and jacares. Over there everything died, entendeu? It is this that I say about the environment, ne? It is normal. If you take the mosquito from its natural habitat, ne? In Alvorada it used to be difficult to find

mosquitoes. In Guandu they had them, in Guandu there were a lot of mosquitoes. Now, the mosquitoes all came to stop here [in Alvorada]. It is horrible."

Emotional impacts

Suffering resists physical / psychological separation (Victora, 2011) and within the interviews and conversations discussed above, the emotions that are intertwined with the more material concerns reported, are also to be found. At some point in most of my interviews the issue of 'feelings' came up. Having discussed illness, suspected illness, legal cases against the TKCSA, the campaign against the factory, issues with housing, changes in the 'natural' environment of the area, and difficulties fishing, there was almost always an associated statement about the ways those things made the interviewee *feel*. We have seen in these interviews, reported in this chapter, that a general 'suffering' has been mentioned, that 'worry' was a common emotional response to health concerns, as well as 'desperation' 'fear' and 'nervousness'. Local people who had been through the floods expressed anger at their repeated losses. A sense of sadness and loss accompanied many explanations about the environmental changes that had followed the arrival of the TKCSA. Fishermen felt angry and indignant that such an unfair situation had been imposed upon them, and worried that they would not be able to continue to feed their families. Many expressions in these interviews that signalled the scale of the problem and the frustration and resignation at most people's inability to do anything about it, came in a religious format. Peppered throughout these interviews was the phrase *'Só Jesus na causa',* or variations on this phrase, which loosely means that things are so difficult that 'only Jesus can help'.

Involvement in the campaign seemed to bring on its own set of emotional corollaries. These often included stress and hope. One campaigner said, "Anyway, we are already experiencing this stress... So, this is how we live here. In this fight; in this stress, but always with hope that we can solve something". Another woman who lived with her children near the factory boundary said, "we don't know what the situation will be tomorrow… That is the fear… I worry for my children and for others, because we don't know what tomorrow holds, what will win through, ne? It

can be worse, do you understand? I hope not – I hope that they realise what they are doing to the air. I hope it gets better because it isn't a good thing for anyone". The emotional experiences of campaigners is the subject of further investigation in Chapter 10. In these ways, people I met in the João XXIII, expressed worry, fear, hope, desperation, nervousness, indignation, resignation when they discussed the impacts of the TKCSA.

Conclusion: Centring residents' views

These extracts from interviews and conversations I had during my time in Santa Cruz reflect the variety of complaints that were described to me while I was there. I do not suggest that they fully reflect the variety of opinions that existed amongst people living near the factory at the time of my fieldwork. I have been asked repeatedly, by fellow students and conference attendees, since returning from fieldwork, about the possibility that I have focused too much on the negative impacts of the TKCSA, and perhaps neglected the economic and employment advantages that the company may have brought to the area. I have not focused on claims that the company has promoted positive economic changes in the area for various reasons (please also see Chapter 6). It was not my experience that people living in the area would talk with me about positive economic impacts of the factory. Perhaps this was because some people perceived me as being 'against the factory' as I attended the Stop TKCSA meetings and spent time with anti-TKCSA campaigners. I tried to minimise this perception by assuring interviewees that my aim was not to collect a list of complaints against the company. However, this was an unavoidable consequence of having come to Santa Cruz through connections made with people involved in the protest against the steel mill. Another reason why the economic benefits of the TKCSA's presence in Santa Cruz was not the focus of these conversations was because the jobs that had been promised would be generated for the everyday running of the TKCSA, did not, in the main, end up materialising (Milanez, Scotto, Bossi et al., 2013). It is also the case that I spoke with some people who had been employed in some capacity by the factory, or contracted in through a third party, who complained about these issues I have discussed above (also see Chapter 6 for a discussion of this). Of course, just

because an employee works for a company, this does not mean that they will have no complaints about their employers.

In this chapter I have reflected on people's views in the context of the overall body of data I collected in Santa Cruz, I refer to my own experiences and I have also occasionally added summaries of relevant epidemiological evidence. However, I have tried to ensure that I have centred the views of people living around the factory. It is important to note that I have chosen the quotes and extracts presented here, from a much wider available selection. I have selected these particular extracts because I have judged that, together, they are representative of the majority of the complaints that I heard expressed. In some cases, I have also chosen individual interviews because I think that they condense some of these arguments into a smaller number of words than others. In my choice to include specific extracts I have also looked for clear and explicit mention of the issues that I have found so often repeated in interviews. The themes explored in this chapter are fundamental to understanding the conflict surrounding the TKCSA. The main complaints detailed in this chapter included that residential housing was negatively affected, that dust emitted from the factory impacted health, that fishers' livelihoods had suffered and that the steel mill had had a detrimental effect on 'natural' areas. The following chapters of this thesis will discuss corporate claims about the pollution emitted by the TKCSA, the blame-based explanations for the ill-health people experienced in the areas surrounding the factory, the place of emotion in protest against the TKCSA and attempts by different groups to support those experiencing the impacts of the steel mill.

Chapter 8. Persuasion

Introduction

We have seen that ThyssenKrupp operated the Companhia Siderúrgica do Atlântico amidst significant controversy, since it opened in 2010 until it was sold in 2017. In the previous chapter we discussed that during this period ThyssenKrupp was criticised for the factory's impact on small-scale fishing in the area, for polluting local rivers, and for emitting large quantities of particulate matter into the air (Milanez, Scotto, Bossi, *et al.*, 2013; Viegas, Pinto and Garzon, 2014). Contention centred on the company's polluting emissions, which local residents and campaigning groups named the 'silver rain' ('chuva de prata') to describe a metal dust which rains down on neighbouring areas (Pinto, Trentin and Strautman, 2017). Some of the people living around the factory fear that exposure to the particulate matter emitted by the TKCSA has caused them to experience allergic reactions, regular nosebleeds, headaches, joint pain, shortness of breath, sore eyes, rashes, runny noses and blocked sinuses. Campaigners against the steel mill claim that there has been an increase in the numbers of people with cancer in the area and a rising incidence of sudden and ill-explained deaths amongst their neighbours. Crucially campaigners argue they have been suffering from illnesses that were previously uncommon, they have been falling ill more frequently and they have been experiencing illnesses with greater intensity, since the ThyssenKrupp Companhia Siderúrgica do Atlântico was opened.

Figure 11. A view of the TKCSA from a neighbour's house.

However, there have been debates about whether this polluting metal dust exists at all, if it exists what it contains, how much of it there is, and whether the health problems of the factory's neighbours can be attributed to it. Residents of the areas neighbouring the factory commonly claim that a grey, shiny, dust consistently covers the surfaces of their homes, blackens their cleaning cloths and dirties the clothes they hang out to dry. Campaigners against the factory are convinced that this dust originates in the production process at the steel mill and causes ill-health. The Oswaldo Cruz Foundation's tests on settled dust in the area showed the presence of, aluminium, arsenic, barium, bromine, calcium, cadmium, cerium, chlorine, cromium, copper, iron, potassium, lanthanum, magnesium, manganese, neodymium, nickel, phosphorous, lead, praseodymium, rubidium, sulfur, strontium and zinc (Porto, Menezes, Dias et al., 2011a). The TKCSA was fined three times for the causation of punctual, critical cases of air pollution and the company was asked to pay R$ 10,5 million in environmental and social compensation (Amazon Watch, 2012; Soares, 2012; Pinto, Trentin and Strautman, 2017). The Oswaldo

Cruz Foundation, a Brazilian institution for research and development in the biological sciences, has found evidence of respiratory, ophthalmological, dermatological and psychological impacts amongst people living near the factory (Porto et al., 2011; Dias et al., 2014). There is, therefore, data that suggests that the debated dust existed near the factory and that some of the factory's neighbours were suffering from illnesses commonly associated with high concentrations of particulate matter. Nonetheless, the TKCSA long claimed that this dust was only graphite and therefore presented no risk to health (ThyssenKrupp, 2011; Flörke, 2012). It is in the context of these debates that it is particularly important to understand corporate communication and 'corporate social responsibility' strategies. My focus in this chapter is on the company's engagement with these debates which I analyse, making use of anthropological work on the persuasive use of figurative devices, 'corporate social responsibility' and violence.

In the last few decades anthropologists have developed new approaches to 'corporate social responsibility' (CSR) practices. They have looked at many different aspects of CSR, including the entanglements between business and public institutions (Foster, 2010), corporate health interventions and educational programmes (Rajak, 2011), the corporate negotiation of accountability (Coumans, 2011), and the contradictions between CSR and workers' rights (Cloud, 2007). Within this burgeoning area of research anthropologists have explored the corporate use of figurative speech for rhetorical effect. Peter Benson and Stuart Kirsch (2010b) identified a corporate discursive strategy, which they have called the 'corporate oxymoron'. Corporate oxymorons, they argued, are made up of the application of a positive descriptive label to a literal term for corporate activities or products, such as in the case of 'safe cigarettes' (Benson, 2010a) or 'sustainable mining' (Kirsch, 2010). Particularly within what Benson and Kirsch call the 'harm industries' the oxymoron works to shape debate by limiting, neutralising, or setting the terms of critique (Benson and Kirsch, 2010b; Foster, 2010). I aim to theorise beyond the corporate oxymoron to examine other types of figurative speech, to look at the ways in which these tropic offerings can be similarly employed in attempts to shift and mould debate. In this chapter I look at how the TKCSA's

representation of factory emissions made use of various figurative devices to deny that emissions contained noxious substances, to downplay the importance of episodes of critical air-pollution and to claim that the factory's emissions could not lead to injurious impacts.

I focus on one claim made as part of the company's communication strategy around the subject of factory emissions and human health. I came across this strand of the TKCSA's corporate communications at an event that formed part of ThyssenKrupp's corporate social responsibility programme. At a tour of the TKCSA PR representatives made the assertion that emissions were only graphite. The underlying meanings of this claim were formed through analogy, simile and synecdoche. I explore how these figurative devices highlighted certain views of corporate action and omitted and evaded others; narrowed the scope for debate and reinforced a sense of hierarchy in the relationship between the company and its neighbours. I argue that it is only by paying close attention to the intricacies of corporate language that we can understand the depth of feeling displayed in response to it. In this way I build on anthropological investigations of corporate communicative strategies, through a focus on the TKCSA's public relations language as a mode of violence in and of itself, and I trace the emotional reverberations provoked by corporate communicative strategies. By examining corporate communications in detail, I aim to better understand why residents experienced various emotional responses to Public Relations language.

It is important to analyse public relations discourses and to examine the ways in which they are embedded in their corporate cultural, and wider political, context. As we have discussed in Chapter 6, the TKCSA functioned for years without a permanent operating license and an official process (the 'Terms of Adjustment of Conduct') was underway in order to assess the TKCSA's activities, at the time of the tour of the factory that I attended (Viegas, Pinto and Garzon, 2014). ThyssenKrupp was already exploring the option of selling the TKCSA by the time of my visit (ThyssenKrupp AG, 2014) and was embroiled in over 200 legal claims for damages (Informe ENSP, 2016). In this context, public opinion regarding the

factory's operation acquired a new importance and therefore corporate attempts to have an impact on local attitudes require detailed inspection.

The tour of the TKCSA

During its operation of the Companhia Siderúrgica do Atlântico, ThyssenKrupp offered tours around its factory grounds, which the company called its 'Open Doors Programme'. Local residents were encouraged to request attendance by email, to "discover how steel is produced'. The TKCSA stated it undertook this activity to allow the public to get to know 'up close', what it argued was one of the most modern and sustainable steel plants of the world (ThyssenKrupp CSA, 2014a). After spending six months in Santa Cruz, living two streets away from the perimeter fence of the TKCSA, I requested to visit the factory.

Figure 12. An advert for the TKCSA's 'Open Doors Programme' stating, "Come visit us and discover how steel is produced."

Source: Former TKCSA website, around 2015/2016. Translation by the author.

That day I was joined by a group of older women from a local community centre. We were shepherded into a room that reminded me of a school classroom, with rows of seats facing a large table at the front. The walls were adorned with colourful publicity posters, and we faced a white board and flip chart. A small tote bag with pens, note-paper and promotional leaflets had been left on every chair. The event was staffed by a middle-aged white man with greying hair and a slight paunch, and a younger woman who seemed to be acting as an assistant. They were both wearing smart-casual clothes and what seemed to be a constant smile. Their poses

conveyed a sense of casual authority and certainty as they leaned back against the front table and jotted notes down on the flip chart. They played a short promotional film by way of an introduction. As we watched, we learned, through its sweeping aerial camera shots and its seamless presentation of the industrial process, about the company's recycling activities and the contribution that the TKCSA's steel made towards 'modern life'. After the film ended, the public relations official went on to add a short explanation of the recent history of the TKCSA and some general information about the site and its successes. He mentioned, but brushed over, the critical polluting events that occurred in 2010 when substantial showers of metal dust fell on the TKCSA's neighbours and settled in thick layers over the area (Gaier, 2012). The PR representative stated that these incidences of pollution had been due to teething problems at the beginning of the steel mill's time in the area, and that this was to be expected when such a large factory began to operate.

An older woman seated at the front of the group questioned this, apparently not happy to let the TKCSA staff member get away with his explanation. In an impatient voice she said, "well, what about this dust? My neighbours are saying that it can cause cancer". There was a general murmur of concern from the audience at this point. This woman's question was representative of a commonly expressed concern around the steel factory, where many were worried about the amount, and content, of the dust emitted, and what this dust might be doing to their bodies.

In response to this question, the PR representative maintained a bright face and a smile and only the slightest flinch of his shoulders illustrated any discomfort. Pushing his hands downwards in a gesture that seemed to be an attempt to quell discontent, he told us he had just been about to get on to that issue. He went on to say, "You see, this dust is just graphite, and of course, you all know that graphite presents no risk to health. Otherwise, we would have small children falling ill, and getting cancer all over the place." He smiled at this conclusion and seemed to wait for further questioning on the subject. I felt that he had lost his audience at this point, as many of us seemed slightly confused. He held up his pencil and asked,

"what is it that children do with these? Kids put pencils into their mouths, don't they? Haven't you seen children putting the end of pencils in their mouths while they are drawing? Chewing the end of their pencils? If this were dangerous, there would be high rates of cancer amongst small children. But that isn't the case, is it. It's just like that."

He allowed a short pause, too short to permit further questions, before moving swiftly on to talk about the modern-day usage of steel and its importance in a modern economy. I didn't get a chance to talk with the woman who had posed her objection about the company's pollution, or to gauge if her concerns were shared amongst the women on the tour. After the presentation we were quickly shuffled out of the room and onto a bus where the tour leader provided a running commentary about the factory infrastructure, which, we were told, limited the factory's emissions and re-used potential pollutants.

Underlying meanings of corporate communication

Anthropological investigations of 'corporate social responsibility' and corporate discursive strategies have shown that corporations make use of figurative speech for rhetorical effect. For example, 'corporate oxymorons', such as 'safe cigarettes' (Benson, 2010) or 'sustainable mining' (Kirsch, 2010), are deployed to restructure meaning and recast 'harm industries' as innocuous (Benson and Kirsch, 2010b). In this way corporate discursive strategies emphasise some, and obscure other, information (Foster, 2010). Evasion of corporate accountability through 'corporate social responsibility' has been the subject of much anthropological investigation (Rajak, 2011; Kirsch, 2014; Coumans, 2017). Research in Latin America has shown that corporate discourse, in the context of hierarchical attributions of value to different kinds of knowledges, can stifle debate, evade critique and maintain the status quo (Li, 2015; Babidge, 2018). The structures leading to the suppression of local resistance in environmental conflicts in Brazil have also been well documented (Zhouri, 2015; Rigotto, 2017; Santos, Ferreira and Penna, 2017). In the case of the TKCSA, similar corporate strategies and figurative devices are employed. I build on these observations by locating corporate communicative violence in the intricacies of corporate language itself and by examining corporate

communications to better understand emotional responses to it.

Before its sale, the TKCSA officially claimed that any dust emitted from the factory was graphite, and that graphite is a non-toxic material (ThyssenKrupp CSA, 2012). The way this claim was made to attendees of the TKCSA guided tour, employed various figurative devices in an attempt to allay concerns about the contents and impacts of dust produced by the factory. The PR representative's explanation used simile to suggest that inhalation of the dust found around the factory (whose content was contested) was *like* sucking on a pencil. The claim was also an analogous statement. The argument was that emissions from the TKCSA are to local residents as pencils are to children; or to put it another way Emissions : Residents :: Pencils : Children or A:B::C:D. This argument focuses on the relationships between things (Sapir & Crocker, 1977) and its persuasion lies in the lack of negative outcomes for D from its relation to C, this is then transferred on to the relation between A and B.

The public relations officer also presented his audience with a synecdoche (the generalised classification of the graphite mineral is replaced with the more particular solid graphite used in pencils) (Friedrich, 1991a; Sapir & Crocker, 1977). Graphite exists in different forms, which vary greatly in terms of their properties (Pierson, 1993a). Graphite is subjected to a variety of processes to transform it into pencil 'leads' (Read, 1983a). The representation of the metallic dust emitted from the TKCSA as if it were the graphite in pencils, that undergoes a number of specific processes, is a figurative representation of a whole through a specific part (Sapir & Crocker, 1977). It is worth noticing these figurative devices so we can understand the ways this corporate communication functions. Uncovering the meanings behind this discourse highlights its violence, justifies residents' interpretations of corporate messaging and allows us to understand the intensity of feeling surrounding it.

The argument made by the TKCSA public relations staff used these figurative strategies to 'translate' technical information, to highlight safety and to omit issues associated with the particulate matter in Santa Cruz. Public relations theory has

long been concerned with communicating technical details to allay public fears of the unknown or uncertain (Murphy, 2000; Price, 1994a). This has led to the development of forms of 'technical translation strategies', in order to "manage meaning, represent the organization, build trust and credibility and manage uncertainty" (Stephens et al., 2005, p. 391). One type of 'technical translation strategy' is the use of metaphors or images to elucidate complex or uncertain science. This strategy has been theorised as a means to help audiences 'rethink' their beliefs in relation to technical issues (Rowan, 1999a; Stephens et al., 2005). In this case, the figurative image of a child sucking a pencil carries various associations (Lakoff and Johnson, 1980); that particulate matter was harmless, unimportant and that knowledge about the impacts of the factory emissions was certain.

The corporate explanation examined here over-simplified the issues at stake, omitting and obscuring crucial information. Hidden by these tropes is the possibility that, whether or not the dust emitted from the TKCSA did contain *only* graphite, it has long been known that graphite can impact the body when inhaled or when graphite dust is in contact with the eyes and skin (Center for Disease Control, 1978). It can be particularly damaging when breathed in; potentially causing coughing, shortness of breath, black sputum, impairment of pulmonary function, fibrosis and cumulative lung damage (Pneumoconiosis) (Occupational Safety and Health Administration, no date). Similarly, the corporate argument discussed here omitted considerable evidence documenting the health impacts of particulate matter around steel plants. There has been a wealth of research on the health effects of breathing particulate matter near steel plants suggesting, for example, increased wheezing episodes and asthma attacks amongst children (Dunea *et al.*, 2016); spirometric abnormalities associated with restrictive respiratory pathologies (Valenti *et al.*, 2016) and increased hospital admissions for pneumonia, pleurisy, bronchitis and asthma (Pope, 1989).

Claims that emissions were 'just graphite' did not address matters which have a bearing on the problem of industrial air pollution, such as, for example, the size of

the particulate matter emitted (Kim, Kabir and Kabir, 2015), or the unequal distribution of adverse health effects of airborne pollution (Makri and Stilianakis, 2008; Landrigan *et al.*, 2018). The evidence that more specifically documents the health effects of air pollution surrounding the TKCSA was also ignored by assertions that the dust was graphite. The Oswaldo Cruz Foundation's two reports detailing health impacts amongst local residents were, of course, similarly unmentioned (Porto et al., 2011a; Pessoa Dias et al., 2014). Indeed, by presenting the factory emissions in such a way the company avoided acknowledging the debate about what the dust was, the concentration of emissions and the effects of living amongst them.

This public relations discourse effectively narrowed the scope of the discussion to the particular polluting events that had been officially recognised and for which the company had been fined. The question, on the other hand, had been about whether the dust emitted from the factory could cause negative health impacts (with a focus on potential carcinogenic effects). People living around the factory often referred to a finer dust falling on areas surrounding the TKCSA, *since* the specific events of critical pollution occurred (Instituto PACS, 2016a). It seemed apparent that the questioner was not solely asking about any specific critical polluting events, rather she was concerned to understand the risks associated with all and any dust that was emitted from the factory. The difference is an important one. While the impacts of long-term exposure to particulate matter are controversial (Badaloni et al., 2017; Guo et al., 2018), noxious health effects may occur as a result of even low concentration exposure over a longer-term (Shi et al., 2016). The woman's question had reflected uncertainty about the potential for harm caused by factory emissions more generally, as well as a locally held concern that injurious effects of the dust could potentially build up over the long-term. By narrowing down the focus of his answer, the TKCSA's representative was able to evade these issues.

Finally, the context of this discussion created a feeling of being 'educated' about this issue, which reinforced a sense of hierarchy and conveyed authority to the TKCSA officials. It is important to extend any examination of figurative speech

beyond language (Kimmel, 2004) and understand the ways in which it is integrated into its surroundings. The question and answer session discussed here, was held within a pseudo-classroom style environment. The front orientated rows of seats, white board, flip chart pads and front desk requiring attention be paid to the front of the room, were laid out for the attendees to learn about, or be educated about, the steel production process. The immediate environment in which the PR representative conducted his talk, and his discursive techniques mirrored each other. The rhetorical questioning and hypophora, such as, "what is it that children do with these? Kids put pencils into their mouths don't they?", provided a pedagogical tone with the implied hierarchy of a teacher–pupil relationship. The statement that "of course, you all know" created a sense of normative expectation that no-one should disagree with the explanations offered. Listeners were infantilised in an approach which echoed the historical paternalism of 'corporate social responsibility' (see Žižek 2009; Rajak 2011).

These elements of meaning in corporate communication show us the violence of corporate discourse, in and of itself. This can be seen as part of the movement to reconceptualise violence to expand its meaning. If one were to use common definitions of violence which prioritise physicality, the violence of corporate communications would be missed. A series of terms have been used to describe social arrangements and structures that put individuals and populations in harms way (Farmer et al., 2006). These terms include 'social suffering', 'symbolic violence', 'structural violence', 'everyday violence' and 'objective violence' (Bourgois and Scheper-Hughes, 2004; Žižek, 2009). The concept of 'structural violence' describes the social structures that put individuals and populations in harms way, or systematically and indirectly exert violence (Farmer et al., 2006; Farmer, 2004). Similarly, Scheper-Hughes proposed the concept of 'everyday violence', which emphasizes the ways in which the regularity and common nature of violence often means that violence is taken for granted (1996; 1992). More recently theorists have attempted to rethink violence in order to account for environmentally embedded violence. These re-conceptualisations have particularly relied on new temporal scales, to move us away from the image of the extreme

event. Nixon has written of the relatively invisible, often forgotten, delayed destruction that is dispersed across time and space that characterises the 'slow violence' of environmental catastrophe (Nixon, 2011). Similarly, Elizabeth Povinelli has referred to 'quasi-events', which never quite come to be seen to have occurred, but create ordinary and chronic suffering (2011). It seems clear that the idea of environmentally established violence needed these new ways of thinking about violence.

I have honed in on a particular occurrence, in the tour of the TKCSA, which focuses on the ways in which violence is embedded in public relations language claiming dust is 'just graphite'. This could be viewed as a punctual element of wider 'structural', 'slow' or 'everyday' violence as discussed above. Or it could be identified as one of the subtle ways that language is used to support oppression, as defined through Gay's breakdown of 'linguistic violence' (1999). However, the point I want to make here is, firstly, that the language used in this ethnographic example contains within it a violence that is only identifiable when one interrogates its linguistic intricacies. Secondly, this type of violence exists in a way that is not necessarily coupled directly with the harm it can create. In this (latter) sense, I follow Max Liboiron, who, writing on pollution science and plastic pollution, argued for a focus on violence, rather than a focus on harms. They have pointed out that it isn't necessary to prove that sickness results directly from BPA poisoning in order to argue that ubiquitous contamination *is* violence (2021). Similarly, Sara Ahmed has put it, "injustice is irreducible to injury, though it does involve injuries" (2014, p. 200). Similarly, it isn't necessary to prove that the TKCSA's public relations exercises are the cause of any specific *harm*, for it to be worthwhile to note the violence that runs through the figurative discourse analysed here. Having said that, it is possible to move beyond this argument to understand forms of affective responses to this kind of violence, and I go on to do so here.

Everyday emotional responsiveness to corporate discursive violence
In Santa Cruz, the violence of corporate messaging intermingled with the dust that enveloped the residential areas next to the TKCSA. Together they produced

affective dynamics that ran through peoples' narratives around the factory. We have seen in Chapter 7 that issues of complaint connected to the steel mill were principally about the health risks of ambient and aquatic pollution, flooding and other effects on local homes, environmental degradation as well as the impact of the factory on fishers. These issues were all the subject of emotional reactions from campaigners and the factory's neighbours more generally. This was, I thought, to be expected. However, I had not anticipated the particular intensity of feeling associated with the company's 'corporate social responsibility' and public relations messaging. I had taken for granted that the company would extol its value to society and make efforts to present itself as a good neighbour. During my time in Santa Cruz I frequently heard dismay at company claims that the dust that had become ubiquitous in the area, was 'just graphite'. It was through the repetition of dissatisfaction about the company's communications strategies, that I realised that not only were residents exposed to the particulate matter itself, but also to corporate denials regarding the potential harm done by industrial by-products and to the claim that the company was actually a force for good in the community; a triple exposure.

Emotional responses to the claim that particulate matter was 'just graphite' were often entwined with feelings provoked by the company's broader 'corporate social responsibility' programme. The tour of ThyssenKrupp's steel mill was just one of many different types of 'corporate social responsibility' activities in the local area. The company undertook many CSR activities locally, including but not limited to, sponsoring local businesses, public institutions and charities, organising sporting events, producing and distributing a monthly 'community magazine', and holding community events. These activities were well advertised in the Santa Cruz and the message was that the TKCSA contributed positively to region.

In a conversation with my friend Mateo, a fisher and seasoned campaigner against the TKCSA, his strength of feeling was evident as he explained how the company's public relations communication and 'corporate social responsibility' campaign bothered him. Mateo was a slight, energetic man in his early sixties, with sinewy

arms and legs and leathery skin, which gave him the look of someone who had spent a lot of time under the sun. That day he was wearing his usual sleeveless vest, loose knee-length shorts and flip-flops, and he had an air of dejection about him. As we sat near the main entrance to the factory, his hands fiddled on his lap, and he struggled to contain a few tears of bursting frustration. A bitter smile on his face, Mateo put his thumbs up while he said, "and they say they do football, and athletics, as if they are doing us a favour! As if they are working to improve our health!". His voice raised at the end of his sentences with the indignation of it all. He carried on, "and they say it is 'only graphite'. You know, it is one thing to pollute this area as much as they do, and it is another to get away with it, and it is worse still that they get away with it while presenting themselves as the 'good guys'".

In a film produced about the campaign against ThyssenKrupp (Instituto PACS, 2016a), one local resident and Stop TKCSA campaigner expressed the frustration and anger she felt at the company's denials. Her voice raised in an upset tone, with accusatorily pointed fingers, she said,

"they say it is only graphite, that it doesn't do any harm to our health. But it did damage my health. They really are hypocrites, saying that it is graphite. They should inhale it too, rather than putting on their masks – because the majority of big bosses over there, they put on equipment, they don't have to inhale it like we do, day and night" (Instituto PACS, 2016a).

She conducted a table-top experiment to prove her point. With a practiced, steady tone and furrowed brow, she unpacked the company's claim, while nodding in agreement with her own words. She moved a magnet across a plate of the collected dust as she exclaimed,

"they are so shameless when they say, that this is just graphite, and it doesn't harm health. How is it then that this graphite sticks to the magnet? Have you ever seen graphite stick to a magnet? I never have. And look here, this here is what is going into our lungs. That is why I say this is killing us bit by bit" (Instituto PACS, 2016a).

The emotion evident in her testimony was embodied responsiveness to living with pollution and to what was felt as the 'insult', contained in the claim that the dust

was 'just graphite'. Her experiment, and her visible anger and frustration while conducting it, was a claim for recognition and a form of recognition in and of itself (Ahmed, 2014). The feelings expressed served as motivational force behind her need to refute the company's argument as she made the demand for others to witness.

Not only did some of the TKCSA's neighbours regularly despair at its corporate rhetoric, they were also routinely cynical about the company's 'intentions' behind public relations exercises. I went to an outdoor bar, a few streets from where I lived, to interview Francisco, a local organiser of a community group that collected and distributed clothes and essential items. While sipping our fizzy drinks we discussed some of the group's achievements and challenges. Throughout our conversation Francisco came across as a relaxed and affable man, invested in making a positive contribution. He became exercised though, as he made the comparison between the work of his community group, and the 'corporate social responsibility' of the TKCSA. He shook his head, articulating with his arms, while telling me,

"The TKCSA came here, it came to our community and brought with it a series of problems… and at the same time, it did something. It started with the 'social' side, so the people would start to accept it. So, what it did was social work, helping with documentation, it helps with a, b, c, but in truth, it is just whitewashing everything that it throws against us. The pollution, all these bad things. These things are covered up. Where you have a lot of money, things don't appear as they should… The company does this social work, so that it covers everything up, in a way, and they manage to make it so the people don't take part in the campaign against them."

In all these narratives we see that residents have identified hypocrisy, sugar-coating, a cover-up and direct contradictions of local peoples' experiences. The anger, cynicism, frustration and indignation, expressed by these friends and campaigners as I have described above, involved judgements about the ways residents were treated by the TKCSA and these were reflected in bodily affective reactions. Campaigners were aware that emissions weren't 'just graphite', they

were conscious of the elements of living with pollution that were left out by the company's PR strategy, and they knew that corporate communications evaded the things that affected them. These judgements were also clearly *felt*; people I spoke with experienced the TKCSA's corporate communications as a kind of violence and expressed these feelings somatically.

Conclusion: Corporate discursive violence

There has been considerable anthropological focus on the discursive strategies used in corporate communications as part of the anthropological study of corporations. Crucially, Benson and Kirsch developed the idea of the 'corporate oxymoron' to attend to the ways in which companies use images and language to manage and neutralize critique (2010b). In the example of corporate communication that I investigate here, the language used is of utmost importance to understanding the ways that the TKCSA engages with discourse surrounding its activities. However, in this particular case, the concept of the 'corporate oxymoron' does not fully explain the account of the TKCSA's public relations representative. The oxymoron is one figure of speech among many that may be employed in corporate communication. We should pay attention to the heterogeneity of figures of speech in corporate discursive strategies. By drawing on the anthropological focus on figurative speech as embedded in, and generative of, cultural representations and social interaction (Lakoff and Johnson, 1980; Fernandez, 1991; Lakoff, 1991; Kimmel, 2004), and by focusing on the confluence of various different types of figurative speech (Beck, 1978), we can see the way that the TKCSA's public relations representative's story functions within a particular political context. The use of analogy, simile and synecdoche, as examined here, allowed the company representative to highlight, hide and evade certain issues, simplify the question, narrow the scope for debate and reinforce hierarchies that undermined the ability to continue questioning.

Catherine Coumans has shown that corporate engagement with debates surrounding mining sites can often lead to distraction from the concerns of impacted communities and delays in effectively dealing with those concerns (2011,

2017). Similarly, I argue that this corporate account came across as an attempt to evade critique and to stifle debate. It is in this way that the public relations language used had the potential to contribute to the maintenance of the status quo. At a time when the factory was functioning without a permanent operating licence, and the company's operations were officially under scrutiny (Milanez et al., 2013; Viegas, Pinto and Garzon, 2014), these rhetorical devices acquired particular importance. It is in this context that a corporate communications strategy that responds to critique in a way that quells discontent can contribute to the possibility for the factory's continued operation. This example of corporate rhetoric constricts the capacity of those who do not have access to technical expertise regarding particulate matter and its health impacts.

In this chapter I have scaled down to examine the rhetorical techniques used by the TKCSA in a particular 'corporate social responsibility' event, in order to uncover violence in corporate discourse. This, in turn, allows us to better understand the feelings associated with corporate claims. Emotion emerges in response to various elements of environmental conflict and 'corporate social responsibility' activities and public relations discourses can be a cause of affect. A focus on corporate communications does not allow us to uncover intentions or aims behind particular claims, nor does it allow us to understand whether discursive techniques alter ways of thinking about corporate operations. However, insights about the TKCSA's tropic offerings have illustrated corporate denials, evasions, distraction and condescension. Herein lies the corporate discursive violence discussed. We have explored some expressions of the emotional impacts of this type of violence, however, I would restate that, as Sara Ahmed has argued, it is not necessary to locate any specific harm caused by violence, in order to conclude that violence has taken place (2014a).

We will investigate understandings of, and responses to, pollution and environmental conflict in the areas surrounding the TKCSA in Chapters 9,10 and 11. These chapters will revisit emotion as a crucial element of local experiences of disputes linked to the TKCSA. Chapter 9 explores the ways that pollution and other

elements of conflict the company, including 'corporate social responsibility' activities, interact with common ways to allocate blame in the João XXIII region of Santa Cruz.

Chapter 9. Blame

Introduction

We have seen in Chapters 6, 7 and 8 that there was considerable uncertainty in relation to residents' health in areas surrounding the TKCSA. During my time in Santa Cruz, Rio de Janeiro, there was little certainty about whether or not there was a particular problem with ill-health in Santa Cruz (and other areas neighbouring the factory). In the João XXIII area of Santa Cruz, there seemed to be some consensus that people living there were more affected by ill-health than, perhaps, other people living in different regions (see Chapter 7). We will see in Chapter 11 that staff in the local State-run clinic appeared to agree that there were particular problems with ill-health within its catchment area. There was some evidence suggesting that the steel mill's pollution had caused ill-health (Porto et al., 2011; Dias et al., 2014), and that this was consistent with what is known about the impacts of particulate matter (PM2.5 and PM10) on health more generally (Valavanidis, Fiotakis and Vlachogianni, 2008; Shi *et al.*, 2016). Whether or not this was the case, there had been a lot of media attention regarding the problem of ill-health in the areas surrounding the factory since it was opened in 2010 (see for example, G1, 2011; tvBrasil, 2012). Instituto PACS, the national NGO highlighting the environmental conflict in Santa Cruz, was also creating media content about the installation and impacts of the steel mill (see also Instituto PACS, 2013; Instituto PACS, 2016b). Therefore, the 'problem' of health in the João XXIII zone of Santa Cruz was already present by the time I arrived, and it was a problem with which I was to become involved through my research.

In this chapter I look at the explanations behind these understandings of poor health. For people living and working around the TKCSA what was the perceived cause of ill-health? Whose responsibility was it? And who was to blame? Perhaps the most influential account of blame can be found in Strawson's argument that blame is an *emotional* reaction to perceived ill will from, or disregard by, another person (2008). Since then, others have added to and altered this definition. George Sher argued that blame is the belief that the blamed agent has acted badly, as well

as the preference that they had not done so; this can (but does not necessarily) lead to a set of dispositions such as anger, reproach or hostile behaviour (2006). Angela Smith emphasised that blame necessarily includes moral protest at the mistreatment of oneself or another (2012). Elements of these definitions fit well with the sorts of blame that I encountered in Santa Cruz. For the purposes of this chapter, I have understood blame as normally involving an emotional reaction (perhaps including anger, indignation or reproach, for example) attached to particular views of the morality of causation and responsibility.

Anthropologists have long been interested in accusations and blame, and have long linked these to understandings of the social management of uncertainty (Alaszewski, 2015). Here I look at blame in relation to perceptions of health and illness, misfortune and accidents. I examine examples of blame from corporate representatives, people who lived outside Santa Cruz opining on the issues, people living in the João XXIII region of Santa Cruz, and people campaigning against the TKCSA in the local area. I then analyse these examples of blaming narratives within the context of anthropological investigations of blame for illness. I aim to show that while anthropological work on blame has typically identified 'types' of blame (blame invoking magical causation on the one hand or 'lay rational' types of blame on the other) (Scheper-Hughes, 1985; Douglas, 1992; Farmer, 2006; Nations, 2008), the examples of blame I encountered appeared not to fit neatly within these typologies. In the João XXIII area, most people I met seemed to blame someone for something, at one point or another, however, in doing so they often combined 'types' of explanation, or the same person might reach for different explanations at different times. The emotional experience of blame around the TKCSA included beliefs about scientific evidence, social injustice, divine retribution, moral standards of behaviour and spiritual practices.

Corporate blame for ill-health

The 'Corporate Social Responsibility' arm of the TKCSA's work at the western edge of Rio de Janeiro had its own brand name. The company re-branded this part of

their work the '*Usina Comunitaria CSA*', or 'Steel plant of the Community' (PACS, 2015).

Figure 13. The steel mill's rebranded logo for the 'Corporate Social Responsibility' arm of its work (Ideiatrip, 2015).

The 'Usina Comunitaria's' activities were advertised extensively on billboards, on the signs above the businesses and organisations they funded, through loud speaker at bus stops and sound trucks, and on the ubiquitous sports kits provided for their sponsored children's sports activities and in their monthly magazine '*Alô Comunidade*'. The TKCSA's magazine seemed to be everywhere, with 50,000 copies distributed every month (Viégas and Mendes, 2017, p. 115); it was handed out to cars in traffic jams, it was laid out in piles in various public institutions and it was free to collect from local shops.

Figure 14. Copies of the monthly magazine 'Alô Comunidade!', produced by the TKCSA, laid out for people to pick up at the reception of the local State-run clinic.

The company that designed the branding of the 'Usina Comunitaria', '*Ideiatrip'*, has since stated that the TKCSA's expectations of their work was "to feel recognized" within the local community (Ideiatrip, 2015). Ideiatrip argue that brand visibility and positive associations created among local people were significantly impacted by the uniforms they designed for children participating in TKCSA social projects and events (Ideiatrip, 2015). The issue here is not whether or not this was correct, but that presenting a positive image of the company in the local vicinity, was clearly an objective behind the company's CSR activities.

Another objective behind the TKCSA's CSR work was to comply with the requisites placed upon them in various environmental agreements undertaken between the TKCSA, the State Government and national environmental organisations[27] (Viegas

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[27] These agreements include, but are not restricted to;

a) The environmental commitment agreement (*termo de compromisso de compensação*) signed in 2007 between the TKCSA, Rio de Janeiro State and FEEMA, the State Foundation for the Environment (*Fundação Estadual de Engenharia do Meio Ambiente*) with the objective of establishing financial investment as a means of environmental compensation.

b) The Terms of Conduct Adjustment agreement (TAC) signed by the State Secretary for the Environment (SEA) the State Foundation for the Environment (FEEMA), the State Institute of Forests

et al., 2014). The Terms of Conduct Adjustment agreement *('Termo de Ajustamento de Conduta'* or *'TAC')* of 2012, for example, stipulated, that the TKCSA must undertake sporting and educational activities for the communities living around the João XXIII Avenue, finance the paving of Santa Cruz's roads and edit a free magazine for the local community (Viégas & Mendes, 2017, p. 115; Rocha, 2018, p. 24). More than one hundred and thirty demands were made of the company in the Terms of Conduct Adjustment agreement (Viegas et al., 2014; Viégas & Mendes, 2017). These agreements recognized the TKCSA's non-compliance with various conditions established under the Installation License and declared various actions that the TKCSA was to undertake by way of compensation (Viegas et al., 2014). The TKCSA presented some of its actions in compliance with the Terms of Conduct Adjustment agreement as socially responsible efforts made by the company for the good of the local population, neglecting to mention that these activities were mandated compensation as established in these agreements. For example, the magazine *Alô Comunidade!* was established because it was required by the Terms of Conduct Adjustment agreement while the TKCSA claimed it had been set up for the benefit of the João XXIII community (Viégas & Mendes, 2017).

The company engaged in various types of CSR activities in the local area. As part of the compensation established in the agreements mentioned above the TKCSA agreed to pay for the development of various public institutions in the area, such as the Enrich Walter Heine College (Kaplan, 2017, p. 2) and the Ernani Braga Family Clinic on the João XXIII Avenue (PACS, 2015, p. 30). The company also developed many ongoing community services such as the 'Copa Social' which

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(IEF), the Rio de Janeiro State Agency for Rivers and Lagoons (SERLA) and the TKCSA in 2008. This agreement recognised that the TKCSA had not complied with various conditions of the company's Installation License and established conditions for the adjustment of the TKCSA's activities.
c) The environmental cooperation agreement (the *Termo de Cooperação Ambiental*) signed by SEA, INEA and the TKCSA in 2011, with the objective of improving conditions for the communities neighbouring the TKCSA.
d) A Terms of Conduct Adjustment agreement signed in 2012 between the State Secretary for the Environment (SEA), the State Commission for Environmental Control (*Comissão Estadual de Controle Ambiental – CECA*), the State Environmental Institute (INEA) and the TKCSA (Viegas, Pinto and Garzon, 2014, pp. 153–162).

contributed to the organization of various sporting activities (Rocha, 2018), a course dedicated to healthy cooking (Alô Comunidade!, 2012a), the *Usina Comunitaria* also arranged weddings for local couples through a project named *Casamentaço*[28], and regular 'citizenship' events, which were normally loosely themed and included access to various services and activities.

Figure 15. Advert for the TKCSA's 'Corporate Social Responsibility' programme.

The regular 'citizenship' events, taking place in the areas neighbouring the CSA, were presented as spaces where local residents could 'catch up on life' ('*colocar a vida em dia*') (Alô Comunidade!, 2012b). I went to a number of these events including one that celebrated national Children's Day (*'Dia das Crianças'*), one that was loosely themed around traffic safety, and one that was called '*CSA Social',* run

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[28] The project name '*Casamentaço'* employs a play on words between wedding ('*casamento')*, steel ('*aço')* and the word for marriage with an augmentative suffix ('*casamentaço'*).

jointly with the Industry Social Service of the State of Rio de Janeiro (or 'Firjan SESI'), which focused on providing various social services (such as registration for social security cards and birth certificates) and addressing various different health and safety concerns.

The CSA Social was held on a Sunday in a local state school, next to the walk-in emergency healthcare centre, on the main road that borders one edge of the factory grounds. Inside, stalls were set out along one side of the school, offering information on issues such as violence against women, blood donation, Glaucoma, Narcotics and Alcoholics Anonymous and the safe storage of gas in the home. A section of the space was cordoned off as an area where children were provided with practical lessons on how to brush their teeth correctly. There were group cooking lessons emphasizing 'healthy' food, held in a fully equipped trailer. There was a real-size blow-up house in which families were guided through in order to identify the potential dangers in each room. This focus on health and safety dominated the day. These stalls, activities and services were primarily about informing lifestyle choices and habitual practices of local residents, such as how to avoid accidents in the home, information about exercise, how to eat healthily or how to brush teeth.

A large area (named the 'Quality of Life' space) was dedicated to the provision of basic medical services, such as calculating body mass index, measuring blood pressure and providing lifestyle advice. I went in, and after having my weight taken and my height measured, I was motioned up to the desk of one of the volunteers. The large woman in front of me had a 1950s hair-sprayed hairdo with a baseball cap balanced on top and she was wearing a 'CSA Social' t-shirt. She greeted me with a quick smile, and then a significant sigh as she read from a piece of paper. With her head on her fist, and without looking up, she said, "you're overweight, and you should think about doing something about it". "Hmmm. Ok" I said. Although it seemed like she already knew the answer, she asked, "you don't do any type of exercise, do you?". "No", I answered. Feeling like I had to justify my inactivity, I explained that while in my own country I regularly cycled, swam and attended yoga

classes, since I had moved to Santa Cruz I had found it difficult to find an exercise that I could easily manage. She looked at me sympathetically and suggested that perhaps I should look for some type of physical exercise that would fit in with my lifestyle, "Maybe you could go for walks in the morning. That is free and easy to do" she said. "You need to go at least three times a week. Perhaps you could start off doing a little, and then move on to longer periods of exercise". "Hmm", I said. There was a silence, and I suddenly became aware of how sweaty my hands were in the heat. I expected us to go on to talking about something more. Perhaps she would tell me where the nearest free, outdoor gyms are to my house? Or maybe she has a list of available group exercise classes in the area? When she didn't offer this information, and with the line of people waiting growing, I thanked her and left.

There has been a lot of research about modes of subjectification in which individuals work on their own health and about the movement of responsibility away from society or the State, and on to the individual (Lemke, 2001; Rose, 2001, 2007). Building on Foucault's thesis that politics has become a matter of taking control of the vital processes of life of the population (Rose, 2001; Foucault, 2004) Nikolas Rose argues that new ways of relating to ourselves as corporeal individuals are promoted in our current politics (Rose, 2007). Rose has termed this 'ethopolitics'; this describes attempts to shape conduct so that individuals act upon themselves in order to better themselves (Rose, 2007). This 'will to health', argues Rose, has made it almost obligatory for individuals to accept responsibility for their own well-being (Rose, 2001). This has been examined in many of its forms, including in relation to ageing (Higgs *et al.*, 2009), women's health (Roy, 2008) and complementary medicine (Broom *et al.*, 2014).

My experience of the 'CSA Social' day in Santa Cruz illustrates a case in point. This was a series of institutions, headed by the TKCSA, urging me to better my own health, to take responsibility for it and to develop techniques to improve my corporeal and fleshly self (Rose, 2007). This is particularly striking in its context. As this thesis has already established (see Chapters 7 and 8); questions about health and illness in Santa Cruz were hotly debated and much of this debate

centered on the impacts of the TKCSA. The emphasis of this event shifted attention away from this environmental conflict, and onto individualized efforts for better health. The issue of the potential health impacts of industrial pollution in Santa Cruz was completely omitted. Instead, the stalls informed us about glaucoma testing and the individual risks of drug and alcohol usage. The blow-up house illustrated the importance of looking after ourselves in the home, the cooking lessons were aimed at equipping its audience with skills to cook healthily, the teeth-brushing area gave demonstrations so that children could be taught to look after their own teeth. Attendees were presented with ways that each of us should better our lives, by taking care of our bodies.

At another event, what could be interpreted as a mere omission of the wider issues that affect local people's health (including the suggested impacts of pollution from the TKCSA) was presented to me more clearly as a shift of blame away from the company and onto the local residents. The local celebration of the national Children's Day festival was put on by the 'Usina Comunitaria' in a large clearing in one of the neighbourhoods near the factory. There were bouncy castles, entertainment shows led by a compere, popcorn stands and small fairground rides. At this event I tried to speak with the uniformed people manning the rides and was told directly that they had been forbidden to talk with anyone. I later found a man by the popcorn stand who I knew worked at the TKCSA (I thought he worked in their public relations department, as I had spoken to him at a previous TKCSA event). He was a thick-set, middle-aged white man wearing formal trousers and a polo shirt. He had a badge which identified him as working for the TKCSA. I asked him about one of the slogans I had seen advertised as part of the work of the 'Usina Comunitaria', which had pronounced that one of its projects was "Integrating Families, Rescuing Values"[29]. As he was explaining this slogan to me, he saw some small children running a short distance from us, and they dropped some litter. He quickly declared, "What a poor culture"[30]. I asked why and he answered that "Their culture here is one of rubbish!". He went on to explain that what the TKCSA

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[29] *Integrando familias, resgatando valores*
[30] I have translated this from the sentence "*Cultura muito pobre".*

is doing is showing them that "what they are dirtying is theirs and not anyone else's. We do this work to try to educate them in this way". I asked "About rubbish? Or other things?" and he answered, "ah, dental education, health, rubbish, the question of traffic safety from the day that you also attended. There are many ideas that have to be planted, ne? In the population, in the whole community, in the community of the Reta[31]. All the projects we do are for the community. That is why it is part of our 'co-relationship', it is part of it". He went on to say, "Social projects have to plant values. That was our idea, to rescue some values, morals, respect, ne? Respect towards the old, respecting the rules, respecting our neighbours, respecting institutions, então, this is 'rescuing values', ne? Respecting principles of ethics, morals, what is correct and what isn't, what is correct between a man and a woman, respecting differences". After I pressed further about this element of what he saw as the TKCSA's work in the community he stated that, "We know that today there are values that don't exist or that are minimized, or that are technically inverted. We're here talking about a value here, that is rubbish. One should respect one's environment. Children, when they throw rubbish on the floor in the square or in their own areas, they are dirtying their own leisure area. So we speak to them and we are rescuing one of their values, so that was the idea. That is what rescuing values is".

In this monologue the TKCSA public relations worker brought together the 'CSR' work of the 'Usina Comunitaria', some of its health and safety related activities, and what he saw as the loss of moral values of cleanliness, tidiness, respect for the environment and for each other, within the local community. This was what he thought necessitated the company's community projects. The idea seemed to be that local people need to be educated to look after themselves, other people and their local environment, and that they would be healthier if they did so. Only by teaching the local population values which they lacked, could they live healthier, safer and fuller lives. This goes beyond Nikolas Rose's well-documented 'will-to-health' (2001) and expresses its apparent corollary; blame for poor quality of life, a lack of well-being and ultimately for ill-health. Rather than urging or obliging

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[31] The 'Reta' is another name for the João XXIII Avenue.

individuals to become the creators of their own health and well-being, this type of discourse emphasises the ways in which individuals and groups can be blamed for their own ill-health.

Others blaming the ill for ill-health

The blame I detected in this company representative's views on the local population seemed to me to fit in with a more generalized view that I came across in Rio de Janeiro. Beyond the TKCSA, from people living outside Santa Cruz, the view seemed to be that the problems of people living in poorer, peripheral urban areas occurred because those people did not look after themselves or the world around them. I came across this view repeatedly when I was staying in the wealthier South Zone of Rio de Janeiro. I recall one of these conversations with strangers at a bar in Urca, when I was told in no uncertain terms that the people of Santa Cruz were dirty and couldn't look after themselves or the environment around them. I had asked about pools in the South Zone of Rio de Janeiro, and the possibilities of finding one that I could swim in, without paying a monthly fee. After suggesting options in the South Zone they firmly added that I should never even think of going to a pool in Santa Cruz. The group of people I was talking with laughed loudly. One woman said, 'don't even go there for research purposes, ok?', making a face, with her mouth pulled down at the corners in what seemed to be disgust. 'Those people aren't ready to take care of things', 'maybe in some time, they will be ready'. Her idea was that pools would be disgusting and dirty precisely because the public in Santa Cruz wouldn't look after them. I repeatedly found that some people living in wealthier neighbourhoods of Rio de Janeiro also viewed residents of Santa Cruz as dirty, disgusting and / or unable to take care of themselves or their environments. Of course, I do not mean to suggest that all people, a majority of people, or even a very large proportion of middle-class Cariocas feel this way. Similarly, this perspective does not quite amount to *blaming* people from Santa Cruz for the ailments they might suffer. Rather this was a repeated element of my experience of the wealthier areas of southern Rio de Janeiro and it is part of the context for the relatively common emphasis on the failures of the people whose health was in question.

It was in the local State-run clinic I worked in, in the João XXIII area of Santa Cruz, that this link between the failures of the people of Santa Cruz, and their inability to maintain their own health, was made most explicitly to me. I began working there at the beginning of October 2015, after a long process applying for permission. My experience there was illuminating in various ways, and I will be dealing with some elements of this experience in Chapter 11. Here I want to focus on an interview I undertook with a caregiver[32] at the clinic that I felt was illustrative of this type of blame for ill-health. When I asked her about her training and her route into her work, she began to explain the differences between where she comes from (and lived at the time of the interview) and the setting of her job. She explained,

"This region here, the people are needy[33]. They don't have much education, and I'm not talking about the level of education that I have, but it's like this, there are people here, that arrive here, and you can't have a conversation, because they don't have... it is pure ignorance, because they aren't educated… So sometimes, you want to inform people, you want to explain the use of a medication and they don't understand, entendeu? They don't accept what you're saying. This is what was really complicated for me. Like, day to day, you learn, but it wasn't easy, não. This was the most difficult for me, the adaption was that one. The characteristics of the patients. That is like killing a lion every day![34] So, there are people here who you just don't manage to explain things to them. There are people here who don't even say 'thank you'. It's like what happened last week. Antibiotics have to be taken for seven consecutive days, or ten consecutive days. But sometimes the clinic's supply is finished and so we have to give out less, because sometimes that happens and the clinic is short. A woman, instead of coming back here the day she finished her pills, she took two days to return here. She interrupted her treatment. So we tried to explain it to her, but she barely

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[32] I use the term 'caregiver' so as to be deliberately vague about this person's role within the clinic, in order to protect anonymity.

[33] Here I have translated the Portuguese word '*carente*' and used the English word 'needy'. This could also have been translated as 'lacking', and I believe that '*carente*' is also often used where an English speaker might employ the term 'poor'.

[34] *Esso é matar um leão por dia!*

understood, she made a face, she wanted to take the medicines without thinking about whether it was right or wrong. We wanted to explain to her, 'don't interrupt the course of treatment because you will create resistance'. But she didn't understand, entendeu?... But it is like that. There are days when you don't get annoyed, and days when we get stressed. But, that is the reality of this area, Delia. So, you either accept it, or you get stressed. It is a question of the politics of welfarism. They get everything for free. The majority of them receive the Family Allowance (bolsa familia) and they get their little bit of money, they buy food for their ten children. This is all because of the 'politics of welfarism'[35]. They know the government will give out, and they think that everything they get is an obligation".

After a while, I reminded her what my research was about, and brought up the industry in the area. I asked her if industry was having an effect on the increases in respiratory and dermatological problems that other staff members had reported. She said,

"because of the pollution from industry in the area? I sincerely don't think so. I think that the majority of the respiratory problems here, we get a lot of respiratory problems amongst children, are because of the condition in which people live. It is about hygiene. It is about humid rooms, spaces that aren't very healthy. Because they don't… I don't know. Of course, the industry may be contributing, because it does cause pollution, but I don't think that is it a principal cause, no. I think that it is because of the conditions in which people live, it is a question of hygiene. The houses are small, and badly conserved, there are children who live in humidity, and mould, and that causes respiratory problems. And the skin problems, they are due to a lack of hygiene as well. Badly washed clothing, living

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[35] Fenwick has stated that public concern about 'welfare dependency', particularly in relation to the Workers' Party of Brazil (*Partido dos Trabalhadores* or PT) poverty alleviation programme, the '*Bolsa Familia*', grew after the national election of 2006 (2017). After this time public resentment began to centre around cases of erroneous *Bolsa Familia* payments, the idea that the PT was 'buying votes' and the idea that a dependency on welfare was being created (Fenwick, 2017).

with animals and not looking after them properly. It is a lack of adequate hygiene that is the problem."

In this caregiver's characterisation of the situation in the João XXIII region of Santa Cruz, she describes people as unable to communicate, unable to understand, ungrateful, resistant, and showing an undue sense of entitlement. Crucially, she suggested that the health problems they have are because of the ways in which they look after themselves and their environments. This type of discourse did not characterise the attitudes of all, or even most, staff at the clinic, however it was another example of discourse that did not just claim that maintaining healthy bodies was, and should be, the responsibility of the individual; it went beyond this and expressed blame of the unhealthy for their ill-health.

Local people blaming local people

I found the question of blame for ill-health, accidents and hardships to be one that kept coming up during my time in Santa Cruz. So far, I have discussed blame found within corporate representations of CSR activities in the local area and corporate impressions of local people, as well as blame that can be found in the narratives of people that don't live in Santa Cruz. I also found that blame came quickly on the heels of negative events in the narratives of some of the people that lived in Santa Cruz. During my time in the João XXIII area I heard people blame what they thought of as ill-intentioned individuals, individual health-related habits, wider social behaviour in the area, as well as the TKCSA and the institutions that supported it, for the illnesses, accidents and misfortunes they dealt with. This blame came in the guise of accusations relating to the magical causation of harm, criticism of individual behaviour as unhealthy, understandings of punishment from God for disregard of social mores and assertions about the links between ill-health and industrial pollution. I go on to explain some examples of these instances in which blame was attributed for negative events.

The first example I offer here occurred after I was invited to a beach on a day which I felt was too hot for me to accept the invitation. A whole extended family went to

the beach that day in one small car, including three small children and four young adults. The route to the beach involved a journey along a very busy motorway. It wasn't until the following day that I discovered the car with a shattered windscreen. I was told that during the journey on the motorway, on the trip back to Santa Cruz, the car bonnet had flipped up and hit the windscreen. My friend Clara's son, Paulo, had speeded along with his view completely blocked by the bonnet and had somehow managed to manoeuvre the position of the car to the edge of the road, where he was able to stop and lower the bonnet once more. While the passengers and the driver were all left quite shaken, no-one was physically harmed. Clara blamed this incident on a person known to the family and claimed that a 'plague[36]' had been cast on her family. She argued that, "yesterday's events were the result of plague that was cast ('praga jogada')... it isn't olho grande, não, it is a plague, a plague!".

She went on to explain, "Plague is when, like, you go on a bicycle and then someone doesn't like you and so they cast a plague on your back. They say, 'I hope you fall down and break your face', entendeu? So, for me, this was a plague". She was sure that her son's ex-girlfriend had cast this plague, "people around here talk and Paolo was like, 'oh, olha só, I'm going out' and my son's ex-girlfriend was angry. He said, 'everyone is going to the beach, everyone'. And the family opposite, they always call over there to their people that live in the Rodo, they always call. So they called her". The implication was that Paolo's ex-girlfriend had cast a plague because she had seen an opportunity to take revenge when she heard that Paolo was going out.

Clara then went on to suggest that there were various ways in which local people could cause harm to others. The first was through 'Macumba', which she argued used to be effective but had now lost its power. Macumba is the name that, in the João XXIII region of Santa Cruz, was commonly given to any type of religious or

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[36] This word '*praga*' could potentially be translated into English as a 'hex', a 'curse' or a 'plague'. I am using the term 'plague' here because there is a scarcity of information about 'pragas jogadas' that confirms any one correct translation and this term seems to be the closest to the original term used by Clara.

spiritual practices that were generally understood as using sacrifices or offerings, involving spirits and having African origins. Macumba was often seen to be dangerous and was frequently described to me by evangelical friends as involving devil worship. Discriminatory views amongst evangelical Christians towards Afro-Brazilian religions and their followers are well documented (see for example, de Souza, 2015; Selka, 2010; Valente & de Vargas, 2018). While the meanings associated with the term 'Macumba' vary amongst those who deploy the term and cannot be seen to be static, Macumba is often defined by the classification of Afro-Brazilian religious practices as somehow illegitimate and deviant (Hayes, 2007). Clara claimed that 'sorcerers' ('*feiticeiros*') had taken over from those practicing Macumba and these sorcerers were, at that time, the most effective way to kill someone. '*Feitiçaria'* has a long history in Brazil and has typically been associated with Afro-Brazilian religions (Hayes, 2007; Silva, 2011). Clara's distinction between feiticeiros and Macumba reflected a sense that whilst Macumba used to function, it had been degraded and was, by then, only practiced by people who made money by faking their powers.

According to Clara, any non-magical person could also cause harm to people known to them by reciting the Lord's Prayer backwards, by casting a plague on a disliked acquaintance or through the '*olho grande'*. *Olho grande*, Clara explained, is, "when a person comes into your house, they see you, with your air (air conditioning machine) and they say, 'porra! I would like to have an 'air' like that'. So the person comes and says that, ai, two days later your 'air' breaks". Evil eye beliefs have long existed around the world (Roheim, 1952; Elliot, 1994; Berger, 2013; Weller *et al.*, 2015) and are common in Brazil, as in the rest of Latin America (Junge, 2014; Weller *et al.*, 2015). The evil eye is not 'cast', instead it occurs as a result of envy (Rebhun, 1994) and can be completely unintentional (Weller *et al.*, 2015). This marks its difference from the '*praga jogada*' which is intentionally cast. The relevance of all these phenomena to my thesis is their facilitation of the attribution of blame for misfortune, accident, illness and death. In all these cases the injurious event or illness can be linked to the actions, thoughts, or emotions of an individual. The understanding of the magical causation of harm provided a

means through which some people living in the João XXIII area of Santa Cruz might blame other people living in the same region.

Another case of blame that I came across appeared to be more straight forward (from the perspective of someone unused to sorcery accusations). En route from a supermarket, a friend (we'll call him Davi) caught up with me and told me about a recent change that his family had experienced. His son had just had a baby (let us call the baby Carlo) who was, at that point, living in Davi's house with Carlo's mother. Though I knew this family well, and often went to their house, this was the first I had heard of the situation. I asked him how this arrangement was working given that his house was quite small. He replied that it was ok, but it had been tough, especially because Carlo had needed extra support at the beginning of his life because he had been born with 'problems'. I asked about those problems and if Carlo was ok. Davi answered that Carlo had been in intensive care for some time and that this was because his mother had hidden the pregnancy from her parents, so Carlo had had developmental problems during the pregnancy. I wondered what Davi meant and so probed a bit further about this. Davi said that because Carlo's mother had tried to hide her pregnancy, by wearing tight clothing and pulling her waist inwards with belts, she had caused health problems for her baby. Davi continued to say that she had effectively squeezed her child so much that the baby had been born prematurely with under-developed lungs and a range of other issues associated with premature birth. He explained that Carlo's other grandparents were very strict and they had been upset when their daughter had told them she was pregnant. This was why Carlo's mother had ended up living at Davi's house. There is very limited information available about potential damage done to a foetus by wearing tight clothing during pregnancy. I found a study protocol (Takehara *et al.*, 2015) which suggested looking at precisely this, but I have been unable to find any completed studies to confirm that tight clothing can cause or contribute to premature birth. Perhaps Davi had been told by a doctor or nurse involved in Carlo's case, that tight clothing had caused the baby's problems. And/or perhaps this was a common local understanding of the impacts of tight clothing on the health of foetuses. Either way, I was surprised by Davi's certainty that it was the actions

of the mother which had caused health problems for her child. This example is just one of many I encountered, in which an individual was blamed, by people living in the João XXIII area of Santa Cruz, for causing poor health outcomes through behaviour that is perceived to be inappropriate.

In a different matter, for the deaths of three militia members who had been found dead in the area, Davi firmly attributed the blame to the militia members for their own murders, claiming that God had intervened to protect him. On one of my last days in Santa Cruz before heading for central Rio de Janeiro to get a flight back to the UK, I heard a loud banging on the thin metal front gate at the front of our house and someone was shouting my name. My partner and I were busy packing and cleaning our rented house. I slipped on my flip flops and went out through the front patio area to the thin metal front gate. Davi was there, and I remembered that I had missed him when I went to his house to say goodbye to him and his family. I was pleased to see him, and to be able to say a proper goodbye. Davi lent up against the outside of the front wall as I asked him in for some coffee. He did not seem to want to come in this time and he shook his head, but he stepped up into the patio area and carried on leaning against the gate latch and the wall behind it. His hands fiddled at his waist and he frowned into his speech. I lent on the other side of the gate door frame and asked how he was.

He said, "Delia, I don't want to stay, I'm sure that you're busy. I just wanted to come and to say goodbye." I said thank you and took the opportunity to offer him a drink again. This time I offered water, orange juice or a beer. I almost immediately kicked myself, as I saw his face pull into a more serious expression. I had forgotten that he had given up drinking recently. He said, "no thank you, I've given up drinking, remember?" He added "Now I'm going to church again", as though, in his mind, that were the opposite of drinking alcohol. He paused, and blushed a bit as he asked me whether I might consider going to church when I get back home. I took in some breath, in preparation for my usual spiel that it was possible but unlikely in the near future as I don't believe in God. Before I managed to respond he interjected as if to answer his own question, "maybe one day, you'll just walk past

a church, and you'll feel that you want to go in. You know Delia, it doesn't matter what you wear to church. You can wear anything you like, because you should only be judged in the eyes of God. Even if you're wearing Bermuda shorts and a t-shirt, it will be fine, ta? I'm now back in the men's group at the church, and sometimes I wear shorts and a t-shirt, and it doesn't matter. Don't let what you're wearing be a reason not to enter into a church. Maybe one day you'll find it within yourself to step into a church. I believe that God will move within you and motivate you to step into a church one of these days". He was smiling in a way that seemed to say that he knew that I had heard this a lot, and that he knew that he was saying something that I probably didn't want to hear, but that he thought it was important to say. He continued, "God, he is everything Delia. He knows everything and he will protect you".

Davi went on to explain how God had already protected the Stop TKCSA campaigners. "God already saved us many times. Did I ever tell you about that time my brother was threatened by them?". He meant the militia had threatened his brother and I knew so because of his body language; he lowered his head and nodded sideways towards the 'Militia Bar'[37]. "No" I said and raised my eyebrows with interest. He continued, "three of them came up to him. They had guns, and they threatened him, at gunpoint, telling him that he should stop his work against the company, understand?". I nodded, eyes wide open in surprise that at this late moment in my time in Santa Cruz, Davi was choosing to tell me this story. Davi continued that they had told his brother that they would come after him and kill him if he didn't stop making a fuss. I asked how he had reacted in that moment and Davi replied, "He told them that they could threaten him if they liked, but that he was working on behalf of the community, and that he lived here. They could do what they like, but he wasn't going to stop, they could kill him if they wanted to". Given that one person who had protested against the TKCSA had been relocated in an official protection scheme because he was perceived to be at risk from the militia, this was no small statement.

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[37] See Chapter 4 for an explanation of the 'Militia Bar'.

By this point I had forgotten that Davi's story was about God, not the militia. He continued, "but God was working on our behalf. Within a week those three men were all dead. One was found in that canal there, the other was found dumped in a hole over there (he pointed to what I thought was an area now fenced off as part of the company's land) and the last one was found murdered over in Chatuba". I became aware that my mouth was open as he finished what he was saying. I asked, "and you think that this was God's work?". He answered, "God was looking after us in Stop TKCSA. He had seen what had happened, he saw what they did and who they were, and he made sure that my brother would be safe. It was his will that we should continue doing this work Delia, so he allowed us to do that". While I was still wondering what else I could ask to get into this subject further Davi went back to the idea of my going to church. He said, "I will be praying for you to find God. I am sure that you will. And Delia, I know that God will help us here. I have faith that victory will be ours. God will bring us to victory". This story can be interpreted, as I believe it was meant, as a reassurance that God protects us. However, within it we can also see the logic of responsibility, and blame. It was to protect Davi's brother and the Stop TKCSA campaigners that God intervened, but it was also because of the actions of the 'milicianos'. There was no doubt that Davi was not sorry the milicianos were dead, partly because of his brother's safety, but also partly because the murdered men had deserved the fate that God had arranged for them. Had they not behaved in this immoral manner, God would not have intervened in such a way and they might still be alive. In this sense, they were to be blamed for their own deaths.

Blame for the TKCSA's impacts

When it came to the impacts of the factory, I found that a whole range of different actors were blamed by people living locally in the João XXIII area. The first place at which to lay blame seemed to be the factory itself, with blame attributed to the individual directors (sometimes by name), to different departments (such as the CSR department, the '*Usina Comunitaria*'), to the Brazilian subsidiary of the company as a whole (the TKCSA or the *ThyssenKrupp Companhia Siderúrgica do Atlântico*). For some, it was the German company, ThyssenKrupp, which should

be held responsible for implanting the factory in Rio de Janeiro, when, it was argued, they didn't want it in their own backyard. Those same people also, at other moments, blamed the Brazilian government and the authorities in Rio de Janeiro for accepting the installation of the steel mill in Santa Cruz, when other countries had previously rejected the plans (Rio +Tóxico, 2012). These understandings reflected the complexity of the politics of responsibility behind the impacts of the TKCSA and the complexity of the nature and possibility of blame.

Perhaps most commonly, the TKCSA, the Brazilian subsidiary of ThyssenKrupp, was blamed as a whole, for creating ill-health. This blame was often suggested through references to popular understandings of the science of exposure to toxic materials. These arguments referred to possible, but often uncertain, scientific assertions to make the argument that certain materials may cause detrimental health effects. Edemi, for example, who was a friend of a friend of mine and had been involved in the campaign against the TKCSA, said this about the dust that fell on his house: "Now there is something which worries us a lot, it is other types of gases, that we don't see. Here we are certain that these gases come because of the burning of the coal itself. Coal is a mineral, isn't it. It causes a… you understand? I don't know if coal emits benzene or if it emits other types of gases that cause this allergic problem, this is the problem that we live here constantly".

A woman living on one of the streets near me explained the extent to which her son's health problems affected their lives and named the Companhia Siderúrgica do Atlântico as a potentially responsible party. She explained, "He lives with flu since we came here. Every month I have to take him to the UPA[38] because he lives with flu. He always has pneumonia because of that air, I mean, I don't know if it is because of the air, or because of the climate, I don't know, but before he never was like this. But I think that yes, it is because of the CSA, it is something that interferes a lot with our health. It is the lack of air, tiredness, the cough that comes, sometimes dry. Here there is a lot of dry coughing, ne? It is because of the air." These

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[38] UPA is the Brazilian acronym for the *Unidades de Pronto Atendimento* which are walk-in, emergency care units.

explanations which cited a correlation between the operation of the steel mill, its pollution and health problems in the local area, were common (see Chapter 7). They often alluded to the idea that the causal links between the company, the pollution and the illnesses they suffered were well-known and that there was evidence that backed up these claims.

There were also other arguments, amongst campaigners and others living locally, which posited that the residents of Santa Cruz, and the João XXIII area specifically, were also in the wrong. An example of this can be seen in the words of a local evangelical pastor who held a month-long 'campaign' for miracles in her weekly religious service. I attended some of the sessions, and I wanted to ask her about it, so I went to her house. She walked me through to her kitchen, where she made a pineapple juice for us. As she talked she mixed her drink with sugar and stirred the ice inside. She blamed the people running the factory as well as the local population. She said,

"So many people say about me, 'ah, isn't she a Pastora? Why does she suffer from allergic rhinitis? Why does she complain? Respiratory problems etc. We're all meat, Delia. We are here in this polluted world. It wasn't Jesus that polluted, it is man that is destroying the earth. You can see man killing the population with illnesses, just like the pollution that comes from this firm here. God gives man wisdom, and it is man that goes and does things that kill the population with illness, because of money. You see this, they should have done things properly so that none of this dust would fall on top of our houses, but they don't want to work properly. They don't care about the population that lives around them, because they live a long way away. The moment they want to take their little planes, they can, or their helicopters, and they go away. And us? We are living here by the grace of God, because, if not, Delia, more people would have died. The hand of God is on us, taking care of us. We feel respiratory problems, but God touches us and blesses us so that worse things don't happen. Do you understand? Satan uses people Delia, to do evil. But God always wins."

She smiled at the cat who had jumped up to the seat next to her and was spreading herself out comfortably. She told me that her cats would miss me when I left, before she continued,

"God has the power to close the factory. But only if God wants it to finish. He finished with Sodom and Gomorrah. It is written in the word of God. That city had many lesbians, men who used men like a woman, there was prostitution, and a lot of immorality… Look, maybe God is permitting this factory to remain to show the many, that nothing will happen to God's servants. God will let it happen to those that don't believe. I think that God already cut short many bad things in my life, like my respiratory problems, and to do with that firm, that pollution. I think that the moment that God wants to, he can finish with the factory, you know?". This argument acknowledges the role of those she claims are responsible within the factory itself and within the structure of the company, while it also suggests that perhaps the factory has been sent by God as a punishment for the behaviour of local people. Here the blame is attributed concurrently to the TKCSA and to local people. The fault for local illness is traced through spiritual and non-spiritual routes.

Conclusion: Understanding blame for illness

There is a well-documented history of blame in understandings of illness. Disasters and Illness were associated with sin in the Hebrew bible (Douglas, 1992; Southwood, 2018), with Job's physical demise thought to be a sign of his guilt (Southwood, 2018). Nelkin and Gilman have drawn our attention to the types of discourses that surrounded syphilis in the 16th Century; including the idea that syphilis came from the 'new world' and was blamed on 'Indians' (1988). Susan Sontag illustrated the ways in which blame was often associated with the 'victims' of various illnesses; she highlighted, for example, the ways in which AIDS, was linked to fault (Sontag, 1989). Recently, there has been increasing interest in pervasive cultures of blame arising from environmental health issues. Most recently this has come out of a focus on the climate crisis, through which the attribution of responsibility and blame for climate changes has been shown to be extraordinarily complex, with different 'types' of blame reached for (Rudiak-Gould, 2015; Moore,

2016). This growing focus on global climate change, within the social sciences, has refocused attention onto blame.

Calls have also been made to research the attribution of blame on communities impacted by poor environmental health and political marginalisation (Stephenson and Stephenson, 2016). We have often seen the ways in which individual and society-wide practices are scapegoated for environmental health problems (Stephenson and Stephenson, 2016). Dinah Rajak documents how Anglo-American plc created a moral discourse that externalises responsibility for the spread of HIV even while emphasising the company's moral imperative to treat HIV as a broad social project (2010). Benson investigated how the tobacco company Phillip Morris reframed responsibility for tobacco addiction onto individuals through their 'CSR' based focus on individual choice, parenting behaviours and lifestyles (2014). Hilary Waters discusses the ways in which lead poisoning in Kabwe, Zambia, was depoliticised through the nurturing of ignorance, secrecy, and the idea that lead is 'natural' (2019). The responsibility for lead poisoning was individualised through a focus on everyday activities and personal hygiene, rather than implicating Zambia Consolidated Copper Mines (Waters, 2019). The idea, then, that ThyssenKrupp has focused on individual habits and local social practices as the major shapers of health outcomes for the people living in Santa Cruz, rather than on the impacts of its own emissions, is not a particularly new one. The emphasis in ThyssenKrupp's 'CSR' work on individual failings as well as the incompatibility between social norms and the maintenance of individual health is quite commensurate with previous studies that have highlighted corporate efforts to reframe and redirect understandings of responsibility for ill-health.

It is the literature that focuses more directly on blame and illness that I hope to contribute towards here. Some classic anthropological and medical anthropological authors have been concerned to draw similarities between blaming patterns common in 'modern industrial societies' and those present in so called 'pre-industrial', 'pre-modern' or 'primitive' societies, in order to go some way to dissolving the distinction between the two categories. However, these texts

continued to focus on different 'types' of society and therefore on different typologies of blaming systems. For example, Mary Douglas pointed out the similarities between modern industrial society's 'adversarial' patterns of blame allocation and the 'moralistic' system of blaming, characteristic of what she calls 'so called 'primitive' societies' (Douglas, 1992). She argued that in 'pre-modern' societies, blame may be attributed in three ways. Firstly, it is allocated on a 'moralistic basis' in which a victim is blamed for having broken a taboo or for sinning. Secondly blame is applied based on the idea that an individual adversary has caused the misfortune. Thirdly, blame can be placed on an outside enemy (or a disloyal traitor) (1992). In 'modern, industrial' societies, Douglas argued, a new 'adversarial' system of blaming has emerged, which, similarly to blaming systems in 'tribal societies', rarely allows for a categorisation of death or accident as purely 'natural'. Rather, 'modern societies' are equally quick to search for fault (1992). Douglas claimed that in 'modern societies' the concept of individual freedom is highly valued (1992) and blame tends to be applied to the weak for what happens to them (1992). An explicit objective in Douglas's book 'Risk and Blame' was to diminish the perception of a divide between the mentality of 'pre-moderns' and 'modern society' (Douglas, 1992). However, her account of blame is based around these typologies and her aim is to show how these different systems work in similar ways.

Similarly, Paul Farmer, in his work on AIDS and accusation, posits that while the Haitian and the US systems of blame surrounding the AIDS pandemic had some similarities (principally that they both attributed an important role for human agency in the proliferation of the disease) their underlying systems of moral logic were basically opposed (2006). Haitians, Farmer argued, blamed sorcerers for expediting the sickness or looked to conspiracy theories to blame injustice, historical exigency and US racism. In contrast, he claimed the dominant ideology of blame in North America is embedded in victim-blaming (2006). An aim of Farmer's account also appears to have been to justify and attach value to Haitian systems of blame, however, in doing so, he maintains different typologies of blame.

Moving on to accounts of blame for illness and misfortune in Brazil, in Nancy Scheper-Hughes' study of mother-child relationships in the *Alto do Cruzeiro* in the North-East of the country, infant illness and death was seen to be multi-causal (1985). While women in the Alto were aware that babies died as a result of poverty and hunger (Scheper-Hughes, 1985), some folk diagnoses imbued a lack of will to live to the child and suggested that these children were often left to die by maternal neglect (or *'a mingua'*) (Scheper-Hughes, 1985). The application of meaning to suffering allowed residents to rationalise suffering as penance for sin (Scheper-Hughes, 1992). Scheper-Hughe's account was controversial and Nations (2008) response to her claims illustrated that, amongst the bereaved mothers in her study, many different explanations for infant mortality existed. While some mothers blamed the evil eye, some blamed their personal financial situation or the general economic setting in which they lived and worked, others blamed poor or untrustworthy medical attention (Nations, 2008). While Nations shows that different 'types' of blame can exist within one society, she is not clear that "lay rational" explanations for infant death, and explanations which are "personalistic" or caused by human agency (2008) could co-exist within one single explanation or within the beliefs of any one individual.

These studies of blame have, in the main, held up understandings of blame as fitting into different types of blaming systems. These systems have been variably referred to as 'personalistic' or 'moralistic' on the one hand, and 'lay rational' or 'adversarial' on the other. It is here that my work can add to understandings of blame for illness, accidents and events with negative outcomes.

From the narratives I have shared in this chapter, it is clear that the very same person's accounts may call on all and any of these 'types' of blame-based explanations. In fact, the 'difference' between what is viewed as a 'personalistic' 'type' of blame and what might be seen as a lay scientific argument are often so intertwined that their separation would only be an imposition of anthropological interpretation. The pastor discussed above, made a 'moralistic' claim that the fault for the problems brought by the factory lay with people who lived locally, for their

sinful behaviour. However, within the same monologue her arguments also fitted in with an 'adversarial' culture of blame, as outlined by Mary Douglas (Douglas, 1992). Davi used what could be interpreted as a 'lay rational' argument to attribute blame to the mother of his grandchild for his grandchild's illness, however he also claimed the murder of three militia men was a deserved intervention from God. Here, while the subject matter requiring blame was not the same, it was the same person reaching for two supposedly 'different types' of blaming system. Even when what has been seen as 'different types' of blaming system are not attributed to the same subject matter, or by the same people, it is clear that they exist side by side within the same society. I would argue that in this region, responsibility and blame were just *messier* than other accounts of blame might suggest. In Santa Cruz, blaming narratives are not neatly categorised into different 'types'. People living in the João XXIII area of Santa Cruz often blamed others, but in doing so they referred to explanations based on ideas of retribution from God, the spiritual direction of malicious intent, societal injustices and allusions to biomedical evidence.

In this chapter I have discussed the judgements that underpin blame. What it *feels* like to blame is hard to pin-point except by discussing the interrelated emotions associated with blame. Since I left Santa Cruz, I have been able to ask friends who live there to help me by tightening up my understandings of many of the feelings associated with living alongside the TKCSA (now Ternium). I am very grateful to those who have been able to further enlighten me about their emotions. When I asked a close friend about what 'blame' feels like, and how it feels to blame the steel mill she mentioned anger, disappointment, sadness, and frustration. This is something I noted in many of my discussions with campaigners against the TKCSA. When blame was expressed, it often joined by other emotions; it coincided with a sense of becoming emotionally exercised. Arms were outstretched to implicate the factory, palms were turned to face the sky, brows were furrowed, and lips pursed. As the philosopher R. Jay Wallace has argued in his emotional account of blame, to blame someone or something is to become exercised by the wrongdoing (2011). He stated, "when we are wronged by another, we are not just saddened by their failure to relate to us on a basis of mutual regard; we resent such

treatment" (2011, p. 369). In Santa Cruz, blame seemed to be what added emotions such as anger, resentment, indignation and contempt into the mix of emotional responses to the TKCSA. It was the injustice pinpointed when someone or something could be blamed, that led to these emotions.

Here it is pertinent to bring us back to the company representatives' blame of local people for their own poor health. The TKCSA representative's blame of local residents reflects not only corporate tendencies to shift responsibility onto local populations for the impacts of their own operations, it goes further than this to express blame of local people for what appeared to be perceived as morally dubious behaviour. However, it should be noted that blame was also a common response to illness, accidents and even death in the area. That is not to say that the company deliberately mirrored local people's blaming habits, just that the corporate arguments that I encountered, fitted in with the blame applied by people not living in Santa Cruz towards its residents, and ultimately with the tendency common in the João XXIII area of Santa Cruz, to find someone to blame. This is also not to justify the company's avoidance of responsibility for the impacts of its operations. There are legitimate questions about the impacts of the TKCSA, and rather than answer these questions the company eluded them by refocusing attention on, and blaming, local people for their behaviour. Instead, my aim is to point out that, in Santa Cruz, this corporate attribution of blame is, (while particularly egregious, in that it demonstrates potential hypocrisy that is both marked and severe), just one allocation of blame amongst many. The next chapter deals with emotion as a way of facilitating lives lived with the pollution of the TKCSA and as a form of protest against the company.

Chapter 10. Performance

Emotional engagement with the TKCSA

In this chapter I suggest that emotion is central to local people's responses to the TKCSA. There were as many different attitudes to the factory and its impacts as there were people affected by it, and I cannot adequately describe all of these in this chapter. I will focus, instead, on two ways of dealing with the impacts of the steel mill, which I have broadly grouped together. I discuss these emotional reactions using Butler's theory of performativity. Firstly, I analyse some of the performative emotion I encountered in everyday life that was related to the TKCSA. I particularly focus on what I consider to be everyday performative (Ahmed, 2014; Butler, 1993a) anger and political resignation (Berlant, 2005, 2006; Benson and Kirsch, 2010a) amongst residents of the João XXIII area. This took the form of minimal and repeated bodily expressions of feeling, encapsulating emotion in pursuit of continuing everyday life, despite the on-going difficulties of environmental conflict.

Secondly, I argue that campaigners against the TKCSA engage in what I call 'emotive performance'; using specific discourses and reiterated performances of emotion, as part of what they see as their struggle against the company. I understand the repeated, bounded acts of what I have termed 'emotive performance', in the Stop TKCSA campaign, as elements of 'theatrical activism' (Butler, 1993a). In examining these two ways of dealing with the factory's impact through 'performative emotion' and through 'emotional performance', I see Butler's discussion of 'performativity' and 'drag' as salient. It is Butler's focus *on doing* and her view of drag as the bounded act of theatrical excess and hyperbole (Butler, 1990, 1993a) that I suggest is useful for our understanding of what I have called 'emotive performance'. There is no clear-cut distinction between Butler's 'performativity' and her descriptions of the performance of drag, and this is also evident in relation to 'performative emotion' and my definition of 'emotive performance'. The utility of Butler's theory here is, of course, limited. I do not claim,

for example, that the potential for subversion through 'emotive performance' occurs in the same way it might in the performance of drag; by exposing the 'original' (or, in this case, the 'performative emotion') as a 'copy'[39] (Butler, 1990, 1993b) Drawing this theoretical analogy here works by allowing me to pick out the important elements of campaigners' emotional labour in their campaign against the TKCSA.

It is through emotion that these campaigners construct a sense of 'victimhood' as part of their effort to highlight the impacts of the TKCSA. In arguing that victimhood is agentic in the anti-TKCSA campaign, I build on the work of Cynthia Sarti (2009, 2011), Fonseca & Maricato (2013), Humphrey & Valverde (2007) and Mats Utas (2005). Their work forces us to question singular and uncomplicated understandings of 'victimhood', to, instead, show us its agentic potential. Cynthia Sarti, for example, has argued that understandings of violence in Brazil are intricately linked with the construction of the figure of the 'victim' (2009, 2011). Thus, to shine a light on a particular form of violence, the 'victim' must be constructed. Similarly, I argue that it is through an emotional mobilisation of victimhood that campaigners enact agency as part of their campaign. I also look at how this ties in with specific emphases on the extremity of slave suffering and trauma in the Brazilian context (Oriá, 1996; Oliva, 2003; Cicalo, 2015). Campaigners against the TKCSA were able to draw on a type of 'victimhood' by referring to slavery, which holds particular historical and cultural significance that resonates in specific ways in Brazil, in Rio de Janeiro and in Santa Cruz.

It is campaigners' vulnerability in protest, their radical dependency on the support of social, economic and political structures (Butler, 2015), that renders readable the ways in which emotive performance is enacted in particular settings. Butler's theories of performativity and vulnerability can provide an insight into emotional responses performed to an audience in Santa Cruz and these, in turn, can contribute to our understandings of 'victimhood' and 'agency'. It is through 'emotive performance' that it becomes possible for campaigners to take on the responsibility

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[39] Butler argues that the potential for subversion comes from the exposure of 'original' heterosexuality as a copy of its own naturalised idealisation; gender performativity copies a heteronormative ideal of gender, and drag imitates that copy (1993b).

of their ethical engagement with the world. This chapter will contribute to the wider theme of this section, and this thesis, by introducing some of the ways in which the people I met in the João XXIII area of Santa Cruz (both campaigning residents and those who did not engage in the organised campaign against the TKCSA) were able to deal with life near the factory, and use emotion in their dealings with the TKCSA.

Performative emotion

In everyday conversations with people living around the TKCSA, complaints about the factory were relatively common. Issues of complaint connected to the steel mill were principally about the health risks of pollution, environmental degradation, the company's perceived lack of accountability, danger and poor working conditions inside the factory, corporate failure to engage with residents, restricted working opportunities for those whose livelihoods had previously relied on the local environment (such as fishermen), increased road traffic and what people often saw as the demeaning nature of the TKCSA's 'corporate social responsibility' programmes.

While I was in Santa Cruz, I found that statements and gestures which showed residents' anger, frustration and resignation at the injustices associated with the TKCSA occasionally interpolated our conversations. I often had discussions with friends while they were undertaking tasks they needed to perform, and in these situations it was not unusual that talk would turn abruptly to the TKCSA, and just as quickly, move on from the factory. A discussion during a shopping trip was interrupted by an expression of frustration about the TKCSA's corporate social responsibility programmes, while passing an advert for TKCSA run sports teams. While talking about a granddaughter's pregnancy a friend put her hand to her eyes and complained that cleaning the dust from her courtyard floor had increased her allergic symptoms that day. Similarly, while another friend folded clothes and we talked about her son's unemployment, she briefly complained that her whites had quickly lost their whiteness due to the metal powder. The meanings of these utterances were often in the *doing*, they were performatively acted out; with

outstretched arms and accusatory pointing fingers in the direction of the steel mill, crumpled foreheads and hands slapping laps. Almost inevitably, when I probed further about these issues, these friends would close down these sections of the conversation with a shake of the head, a tut, and an extended exhale.

It was very common for any brief discussion about the TKCSA to take the form of a repetitive rolling shift from injustice, to anger, to frustration and finally to resignation. Perhaps an apt example will help the reader to envisage how these brief interludes occurred. One afternoon, I was sharing a flask of sweet coffee with a friend of mine, we'll call her Sofia. I sat at a marble table on her terrace. She swept the floor of the space as she talked about one of her son's previous romantic relationships. The floor was covered with black and white tiles, which emulated the famous paved seafront walkways of Copacabana and Ipanema. The wave design on a few of the tiles had been placed in such a way as to break up the pattern and those few upside-down tiles drew my line of vision towards them. Sofia stopped sweeping and said, "I have to re-do this floor". I was concerned she had sensed my preoccupation with the interrupted wave patterns, but she continued, "It's the TKCSA. The white on my tiles has gone grey". With one hand applying weight on the broom, and balancing with one bare foot on top of the other, she brought her other hand up to head height, taught and outstretched in anger. With a sharp exhalation of breath showing her frustration, she said, "it doesn't matter how much I sweep them and wash them. I can do it twice, three times a day, and they still stay grey". Looking down at the floor, and then out over the street towards the murky silhouette of the factory across the road, she said, "the dust has permanently changed their colour". As I tried to probe further, asking "oh really? When were they installed?", her response was just to shake her head from side to side and with a sigh say, "you can't do anything, you know? They will continue polluting, and that's it". She appeared to dwell on the impacts of the pollution and her powerlessness to do anything about it, as she closed her eyes for a second, giving a final and almost imperceptible shake of the head, before picking up the threads of our previous discussion of her son's relationship.

The TKCSA is a subject of much importance in the area, and while collective political action against the company had diminished over the first ten years of the steel mill's operation, emotional responses to issues brought up by the factory were still common during my fieldwork. In these instances, people living in the João XXIII area of Santa Cruz iteratively produced emotional responses when discussing the factory. Opinions about the steel mill were relatively important as part of the identities of local people. If being is always a process of becoming (Haraway, 2003, 2008; Puig de la Bellacasa, 2012) and there are no pre-constituted subjects (Butler, 1999) then the repetitive performative emotion of people living in the João XXIII area was an element of subject formation and continual construction of identity. These statements and gestures may seem minimal, embedded as they were in everyday actions and conversations, but I took them as forms of relational self-construction, through which residents came to identify their self-continuity with others, and with the world around them (Das, 2010; McCabe, 2011). Crucially these sometimes minimal expressions of emotion appeared to form part of interlocuters' ability to move on from feelings associated with the factory.

The physical characteristics of this performativity are what allowed interpretation of the true depth of meaning behind these statements. Sofia's closed eyes and barely visible head-shaking were, in part, disbelief that this could be allowed to happen; that a company could set up next door to her and start to release unknown substances into the air. This disbelief seemed similar to Berlant's understanding of political disbelief (2005), involving a sense of suspension in the refusal of material experience. However, at the same time, I interpreted these final gestures as a bleak acknowledgment that this is how the world works, and a concurrent 'putting away' of what was felt as excess feeling. Berlant suggests that while some may interpret this type of physical self-retention, or, as she puts it, 'under-performativity', as an affective apathy, it can also destabilise the expected relations between intensity and importance (Berlant, 2015). Muted bodily performativity can also point to intensity of feeling. Emotional responses do not need to be very exuberantly displayed in order to reveal very deeply held, and important, feelings.

Social scientific attention towards the emotional corollaries of the political economy is not new. Peter Benson and Stuart Kirsch have reminded us of Raymond Williams' work, which suggested that structures of feeling accompany, support and are determined by prevailing political and economic systems (Benson and Kirsch, 2010a). The emotional aspects of resistance to politico-economic frameworks have also long been discussed in the social sciences. James C. Scott refers to private expressions of anger, for example, as an element of uncoordinated resistance in local Sedaka class relations (1985). Social scientific attention has highlighted everyday expressions of cynicism, irony and resignation as important ways of dealing with the oppressive impacts of the political economy, which do not necessarily imply consent (Dumm, 1998; Žižek, 2004; Boyer and Yurchak, 2008; Benson and Kirsch, 2010a). However, some have emphasised the importance of emotion in maintaining the dominance of corporate power. Benson and Kirsch argue that political resignation has become one of the most common modes of political action (Benson and Kirsch, 2010a). Corporations, they argue, respond to critique in such a way as to encourage political resignation, by promoting the pervading idea that critiques cannot be effective and that social structures cannot be changed (see also Chapter 8) (Benson and Kirsch, 2010a).

Performative emotion often expresses the sentiment that things probably will not change for the better, and a recognition of the limits of the resigned subject to alter the situation (Benson and Kirsch, 2010a). The resignation that is reiteratively embodied in gestures and statements is ultimately an expression of cynicism about the possibility for social transformation. However, as Manuel Tironi (2018) has claimed, I would also add that emotional labour is being undertaken in performative emotion, not only to restrict emotion in line with normative emotional discipline (Berlant, 2015), but also in order to carry on living. I understand these minimal gestural inflections as similar to Thomas Dumm's understanding of 'waiting' (1998). They are part of a moment of resignation through which life can be renewed; they are positive actions in which quiet despair intensifies, and out of which one can return to ordinary life (Dumm, 1998). This is, importantly, action undertaken within

the possibilities for acting. It is what can be done, to encapsulate emotion, and prevent it from leaking into, and disrupting everyday life.

Emotive performance

The issue of particulate matter emitted by the factory has been the subject of many political actions including meetings, protests, photographic exhibitions, public conferences, films, interviews, news stories, public health reports and popular epidemiology workshops. The factory's emissions have also provoked various legal challenges. The TKCSA took legal action against the Oswaldo Cruz Foundation's public health professionals who evaluated the health impacts of the company's emissions (Bianchi, 2011; Werneck, 2011). Rio de Janeiro's Public Prosecutor's Office has brought charges against the TKCSA due to atmospheric pollution on two occasions (Ministério Público do Estado do Rio de Janeiro, 2016), and against a previous Governor of Rio de Janeiro, Sérgio Cabral, for illegally authorising the opening of the factory's second blast furnace and more than 200 legal claims for damages were on-going when I left Brazil, with the Public Defender's Office (Informe ENSP, 2016).

All of these elements of the environmental conflict in Santa Cruz are important. Here, however, I will be focusing on some of the emotional aspects of political interventions in the campaign against the factory. In doing so, I am mindful of the risk of emphasising the importance of emotions in political discourse. As Sara Ahmed has pointed out, emotion is often viewed as more primitive than 'thought' and 'reason', and emotional responses are often understood as reactive weaknesses or easily swayed expressions of impaired judgement (Ahmed, 2014a). Deborah Gould highlighted the social scientific origins of the representation of social movements as pathologically emotional, as opposed to capable of reason, in Gustave Le Bon's work on the 'crowd', and argues that current accounts are often equally reductive (2010). Perhaps another potential pitfall I am aware of, in focusing on emotion in the making of this particular political world, as Lauren Berlant has argued, is the fetishisation of emotional injuries; adding value, and attaching identity, to the suffering one would hope to overcome (2000). However, I

chose to focus on the emotion of interventions in the campaign, for the practical reason that during my time in Santa Cruz, the campaign against the factory tended to highlight individual experiences and emotional responses. My focus on emotions is related to my recognition of the power associated with emotional being in the world (Hardt, 2015), as well as my interest in the limits of that power.

While the NGO active in coordinating much of the campaign, the *Instituto Politicas Alternativas para o Cone Sul* (or PACS), organised some events in which the emphasis appeared to be on consolidating and publicising a cohesive collective response, much of the campaign appeared to highlight individual stories as representative of the whole. Some events centred on strengthening and highlighting group reactions to the company, for example, these included meetings bringing together residents of Santa Cruz with residents of Piquia de Baixo (a town in Maranhão also effected by pollution from mining and steel industries) (Instituto PACS, 2016b), and a meeting with representatives of the Brazilian Bar Association (PareTKCSA, 2015). For these campaign events, a wide participation seemed important, perhaps partly because campaigners hoped that strength in numbers could boost or reinvigorate the campaign. At these times residents and NGO staff managed to find upwards of around fifty people to attend. Similarly, the swiftly mobilised opposition from fishermen to the installation of a barrier over the Canal São Francisco, constructed by the Association of Companies of the Industrial District of Santa Cruz and Adjacent Areas (AEDIN) attracted greater numbers of protesters. This surge of protest in the local fishing population seemed to stem from fishers themselves, perhaps because of the threat to their livelihood (Hollowell, 2016). These campaigns emphasised the numbers involved in the opposition towards the company.

However, many campaign events were more clearly focused on individual testimonies, illustrating personal experiences, highlighting the ways individuals had been affected by the factory, and focusing on personal emotional responses. These events included interviews between television news anchors and individual residents, a journalist's report commissioned by PACS (which combined individual

accounts with an historical report of the development of various problems associated with the factory and its establishment in the area) (Pinto, 2016), and a film called *Treliça* (Truss) commissioned by the *Instituto Politicas Alternativas para o Cone Sul* (Instituto PACS, 2016a). Here I go on to analyse the focus on personal stories in campaign events, in which campaigning residents performed various emotions as their contribution towards the campaign. I will also particularly look at the emotive performance of the film '*Treliça*' (Instituto PACS 2016a), in order to illustrate the centrality of emotion to understandings of the impacts of pollution as well as to the campaign work against the factory.

Emotional meetings

It was in the first few Stop TKCSA meetings I attended that I began to realise the strength of emotion surrounding the factory. At my first monthly meeting, one of the fishermen interrupted some feedback about legal work done on the behalf of residents. This campaigner began to say that he had been fishing when an accident had happened. A large boat carrying materials for the TKCSA crashed into a fisherman's boat on the Canal São Francisco, and two fishermen were dragged down in their nets. As he talked the pitch of his voice grew higher, he released a sob, and a first tear escaped his eye. The rest of the meeting's chatter stopped and, by this point, the fisherman was crying with such strength that he struggled to get his words out. I stopped typing, and watched as a fellow campaigner comforted him. His emotion seemed to fill the room with its raw presence. A few seconds of silence reverberated amongst us before an NGO representative moved us on to another subject.

At another meeting in Santa Cruz, campaigners and their allies sat in a circle together with councillors (*vereadores)* from the Municipal Chamber of Rio de Janeiro (PareTKCSA, no date). Residents, scattered around the circle, took turns to explain what their experiences had been of the impacts of the TKCSA. Some focused on the way in which the company had not consulted with residents, some emphasised the apparent lack of accountability and many talked mostly about the dust, and its impacts on their lives. One man had brought with him a small plastic

tub of congealed black sludge. When it was his turn to speak, he stood up and paced around the inside of the circle, thrusting the pot into the faces of attendees who had come to Santa Cruz from outside of the small group of campaigning NGO staff and residents he already knew. He explained that this sludge was a mixture of the dust, and rainwater that had collected in his front yard. He railed against the management of the factory and local government, for allowing such intense levels of pollution. He spoke quickly, in a loud voice, and paced backwards and forwards in an agitated manner. He shook the pot of congealed metal dust, imploring us to look at it. He insisted that we (those attendees he did not yet know) consider if we would like to live with this dust? How would we react if a huge factory was installed next to our houses, and we suddenly had no choice but to continuously inhale an unknown substance? By the end of his contribution, I could sense a feeling of awkwardness from other people in attendance, both amongst residents who perhaps wanted to get on to the next person's account, and councillors, who seemed to be slightly unnerved at the extremity of the emotion on display.

Some similar sentiments can be seen in the campaign film, called *Treliça*, commissioned by PACS (Instituto PACS, 2016a). This video was clearly designed to focus on arguments against the company. In it, specific emotional expressions are highlighted by the strategic use of particular types of music and images, fade-out techniques and the superimposition of multiple views. The film is perhaps an example of the professionalization of video activism identified by Ristovska amongst others (2016)[40]. I include here some still images taken from the film *Treliça* which show the extent and some of the variety of emotional responses and the physical embodiment of emotion in campaigners' closed eyes, slight shakes of the head, tears, hung heads, arms wrapped around the body, raised pointing fingers, the movement of the tongue across the lower teeth and so on.

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[40] Ristovska uses the term 'strategic witnessing' to describe the phenomenon of professionalization of video activism, which downplays the traditional paradigm of video activism as a public assemblage of critical voices, and focuses more on how to render activist witnessing comprehensible to relevant stakeholders (2016). However, she argues that this means that witnessing can be confined to institutional audiences, and I would argue that this video has widened access to information about the impacts of the TKCSA (Ristovska, 2016).

One of the residents who performed emotion on the film *Treliça*, is the fisherman you see below[41].

Figure 16. A fisher active in the campaign against the TKCSA, crying in the film 'Treliça' (Instituto PACS, 2016a).

In this section of the film he explained, "If there is any more crap to send here for us, to dump on top of us, here in Santa Cruz, in the Western Zone, ok, bring it on. We are at the end of our lives anyway, almost everyone is dying anyway, I don't even feel the will to live anymore". Here, this fisherman explained, in the most direct and extreme way possible, the deep emotional impact of the factory. However, he was also crucially, engaged in an extremely bodily performance of this sense of despair, through his tearfulness, the wiping away of tears, his downward gaze and his drooped shoulders.

Similarly, the fisherman below stopped in his tracks, in his interview in the film, while describing the destruction of the paradise of the Baia de Sepetiba.

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[41] I have elected not to use peoples' real names throughout this thesis. While all the people interviewed in *Treliça* are named in the film (Instituto PACS, 2016a), I chose not to assume that this means I have permission to name them in my thesis. However, I am using these still images from the film, which are freely available on the Internet. I have sought and received permission to do so, from PACS.

Figure 17. A fisher explained, "I feel ashamed" in an interview in the film 'Treliça',
(Instituto PACS, 2016a).

He stated, "I feel ashamed", because of this destruction. He paused, his face fell, his eyebrows rose, his frown deepened, he rubbed his tongue along the front of his teeth inside a closed mouth, his eyes darted downwards, and he adjusted his seating position. He eventually brought up his hands, outstretched to either side in a frustrated expression, as he said "what can I say?". The statement that he felt 'ashamed' could suggest various meanings. 'Vergonha' can be translated as shame, disgrace, dishonour, or an unpleasant feeling of guilt, foolishness or failure. It is difficult to impose any one particular meaning here because of the relative multivalence of the word 'vergonha' in Brazilian Portuguese. Perhaps he is pointing to his sense of impotence in trying to protect the Sepetiba Bay, which he describes as a 'paradise'. Perhaps his statement is expressive of a sadness that he is carrying a sense of responsibility that he cannot fulfill, and perhaps he is also expressing anger because he believes others, in positions of power, do not seem to have such a sense of responsibility, or to want to act on it.

I want to suggest that these *Pare TKCSA* campaigners are engaged in emotive performance. Butler argued that the performance of drag is a bounded act using the same citation of norms as performativity, but characterised by theatricality associated with hyperbole and excess (Butler, 1993a; Lloyd, 1999). Like

performativity, it employs signs which have already attained meaning (Lloyd, 1999). It is this 'theatrical activism', (Butler, 1993a, p. 177) that I claim occurs in the Stop TKCSA campaigners' emotive performances for an audience. This theatricality occurs in the sense that it mimes and renders hyperbolic the performative emotion of everyday life (Butler, 1993a). It is in these senses that I have come to understand the performance of emotion in the context of an audience that was somehow related to the presence of the TKCSA in Santa Cruz, to be similar to Butler's descriptions of drag.

Emotive performance relies on previous conventions of emotion, but is also generative of effects. Perhaps, as Ahmed has argued in relation to the construction of 'disgusting' objects and bodies in the wake of the September 11th attacks on the World Trade Centre in New York, the hope here is that performance will make emotion 'stick' to the factory (Ahmed, 2014a). In Santa Cruz, campaigners' emotional labour involves an attempt to construct the factory anew, to associate it with their negative feeling and to make sure those feelings 'stick' (Ahmed, 2014a). Of course, emotive performance implies action with the hope of having an impact, but not necessarily with a strong sense of probable effect (Butler, 2010).

As bell hooks has argued, defiant speaking can be an act of resistance (Hooks, 1986), however, here it isn't the speech act alone which shows the force of campaigners' agency, it is the physical accompaniment of bodily enactment. Corporeally performed discourse can 'say' more than the explicit 'content' of a verbal utterance (Butler, 2006). The performed statement from the film *Treliça*, "I feel humiliated and mistreated" can also be a call for solidarity, and "I feel ashamed" can also mean, "governing authorities *should* feel ashamed". This is why the emotion is key; the display of emotion can produce another meaning, one that is different to the one specifically verbally communicated (Butler, 2006). I do not claim that this is strategic, rather that there is ambiguity here in what is actually meant by these emotional statements, which can allow for empathic reactions from a variety of audiences, based on a variety of interpretations. Campaigners knew that their role in the film Treliça was to provide relevant information about the factory, but

they also knew that they needed to show how profoundly affected they were by the steel mill. It was appropriate, therefore, for them to express emotion in this context (as I will go on to discuss below), but the ways they expressed emotion, and the particular emotions that emerged, were reflective of the complexity of emotional responses to the injustices that campaigners argued the TKCSA visited upon them. In this way emotive performance, in the context of the Stop TKCSA campaign, is an effort to bring into being certain kinds of realities, within the conditions and possibilities for acting (Butler, 2010, 2016).

Anthropology's victims

It is at this point that questions of agency and victimhood become important to address. Feminist theorists have long been critically engaged in such questions in the context of the historically common association between women, passivity and victimhood and between men, activity and agency (Butler, Gambetti and Sabsay, 2016). In the 1990s some feminists, perhaps most famously Naomi Wolf, critiqued what they called 'victim feminism' which, they argued, stressed the evils done to 'good' and 'sexually pure' women (1993). Since then, feminists have tried to address the accusation of 'victim mentality' by emphasising and encouraging women's agency (Dahl, 2009; Stringer, 2014; Jacoby, 2015). Butler has argued that women have been associated with vulnerability for too long, and the character of the 'victim' has become a negative ontological claim (Butler, 2015), with 'victimhood' understood as a somehow pre-social characteristic (Butler, Gambetti and Sabsay, 2016).

The opposition often posed between agency and victimhood, and therefore the associated loss of victims' perceived agency, means that 'victims' may often find themselves criticised for what they did not do or even for who they are. These criticisms are aimed at the 'passivity' of the victim, which is linked to the causality of the damage the 'victim' suffers (Dahl, 2009). Anthropological claims that people are 'agents' rather than 'victims' are now common (Dahl, 2009). Gudrun Dahl has characterised this as the 'Agents Not Victims' trope and relates its prolific appearance in the social sciences to attempts to write about informants respectfully

(2009). However, the turn towards an emphasis on agency has been interpreted, notably by Nikolas Rose, as part of the neoliberal construction of the importance of individual responsibility for self-reliance and virtuous self-management (1999). Similarly, Rebecca Stringer suggests victim/bad, agent/good formulations reflect neoliberal values emphasising 'personal responsibility' and denying material dynamics that can lead to 'victimhood' (2014).

In Brazil, as elsewhere, the public treatment of violence against women has centred around identities associated with victimhood (Sarti, 2009). In turn, academic interest has approached the political 'work' that can be found in the sense of victimisation (Coelho et al., 2013). In her work on victimisation, Cynthia Sarti has argued that social understandings of violence are predicated upon social definitions of victimhood (2009). Perceptions of violence in the Brazilian National Health Service have been shaped by a classificatory logic of victimhood, highlighting the victimisation of certain groups such as women, children, and older people, to the exclusion of others. In contemporary Brazil, she argues, the construction of a 'victim' is part of the social recognition of violence and suffering (Sarti, 2011). Victimhood carries with it a public call to be addressed (Fonseca & Maricato, 2013; Sarti, 2011) and it is not, therefore, surprising that Stop TKCSA campaigners perform emotional victimhood as a way to achieve the public recognition of the harm done by the TKCSA.

Kleinman, Das and Lock argued that cultural representations of suffering are appropriated for political ends (1997). Since then there has been increasing focus on the issue of the political usages of 'victimhood' and 'victimhood' as an element of political identity (Candea, 2006; Jeffery and Candea, 2006; Humphrey and Valverde, 2007). Anthropological studies have recently looked at victimhood and agency in more detail, in order to ask questions such as, how do particular groups construct a victim-based identity (Humphrey and Valverde, 2007)? What can be gained from acquiring victim status (Jacoby, 2015)? What happens when institutions or social groups with relative power self-define as victims (Candea, 2006; Jeffery and Candea, 2006)? An ethnographic concern with victimhood has

highlighted its role in relationships with the State, or state institutions (Ochs, 2006; Humphrey and Valverde, 2007; Halstead, 2008). Here, I argue, campaigners use victimhood in their campaign against the TKCSA. I believe that, in Santa Cruz, campaigning residents are performing emotion as part of their self-presentation as 'victims'. Emotion shapes the contours of attempts to express political victimhood, and it is through emotion that members of *Pare TKCSA* are able to perform victimhood.

Relatively few anthropologists have shown how self-representation of 'victimhood' can be a form of tactical agency. However there have been some ethnographic explorations of more active political usages of victimhood, and of the importance of emotion to that end. Humphrey and Valverde's study of organisations of families of victims in Argentina has shown the importance of emotions in the creation of a shared identity of victimhood (Humphrey and Valverde, 2007). They have argued that public remembrance of victims of the Argentine State (including those who disappeared during the dictatorship, those who died in the Malvinas war and victims of police violence) has involved 'political mourning', which makes public, private grief. This expression of public grief has coalesced local movements into shared demands for justice. Similarly, Fonseca and Maricato, in their analysis of testimonies of violence against Brazilians suffering from Hansen's disease and their families, argue that their emotive discourses must not be reduced to yet another mechanism of social control obliging deponents to disclose their pain (Fonseca & Maricato, 2013). In this case, many of the testimonies show that the people who displayed their suffering in order to demand action also took pains to show that they were not just passive victims, but rather were active in their own lives and the lives of others, in order to improve their situations. It is the collectivising, 'extra-individual' force of emotional testimonies that shows those affected by Hansen's disease as agents in their struggle (Fonseca & Maricato, 2013).

Mats Utas has collapsed the opposition of agency and victimhood in his investigation of a woman's trajectory in the Liberian civil war (2005). He discusses

'victimcy' as a form of agency in the self-representation as 'victim' of war (Utas, 2005). The Stop TKCSA members self-presented as 'victims', emotionally emphasising the injuries they suffered at the hands of the *ThyssenKrupp Companhia Siderúrgica do Atlântico*. This does not expunge agency from their accounts. In fact, the repeated emotions they performed and their determined claim to victimhood is, precisely, their agentive intervention in the conflict surrounding the TKCSA. This is, crucially, what these campaigners were able to do. It is a contribution they were able to make in the context of unequal power structures, where greater visibility and weight was attributed to corporate perspectives (Kirsch, 2002; Bourdieu, 2003a).

Enslaved victimhood

Perhaps the clearest element of campaigners' presentation of victimhood, and concurrent agency, revolved around the issue of slavery. While discourses of slavery were not common in everyday conversations, the issue of slavery did occasionally emerge in emotive performances. References to slavery were employed in interviews conducted for the making of the campaign video *Treliça*, for example. In this film, three members of the Stop TKCSA claim that they personally were being treated as slaves. The campaigner pictured below claims, "I often say that we live here in open-air slave quarters, ne? In the past the master was Portuguese, and now he is German[42]. And the whip is just snapping at our backs. We can't stand it anymore."

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[42] The TKCSA belonged to ThyssenKrupp; a German company.

Figure 18. A campaigning resident argues that living in the João XXIII area of Santa Cruz is akin to living in an open-air slave quarters, in the film Treliça, (Instituto PACS, 2016a).

Another member of the group Stop TKCSA (pictured below) talks of his own enforced labour, cleaning metallic dust from his house. In the film he stated, "I am ashamed of the CSA, as a company. I am ashamed to tell you, in front of the television, in front of you, that I am an employee of the CSA. I am working for free for the CSA, as if I were being forced. I shouldn't have the obligation to clean out dust from my house. I live 250 meters from the CSA. You are ashamed of me, because I work like a slave of yours."
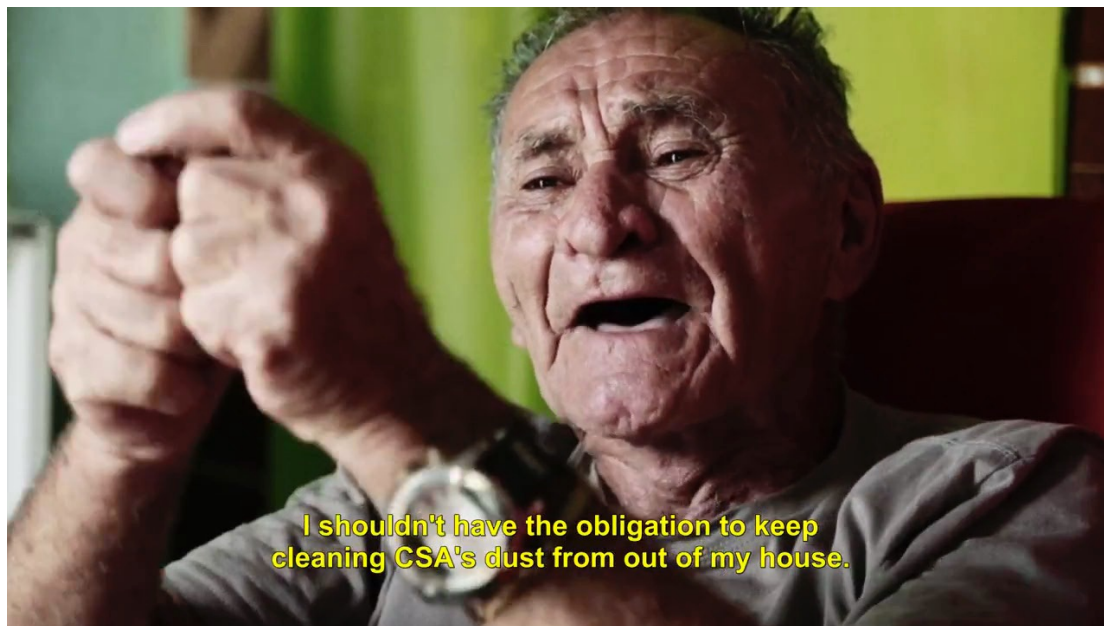
Figure 19. A Pare TKCSA member making a connection between slavery, and living near the TKCSA, in the film Treliça, (Instituto PACS, 2016).

While the public memory of slavery in Brazil is heterogeneous (Araujo, 2010), the country's mainstream iconography of slavery has historically emphasised the extremity of slave suffering and trauma (Oriá, 1996; Oliva, 2003; Cicalo, 2015). Afro-Brazilian museums have more recently placed more emphasis on narratives of resistance (Cicalo, 2015). Andre Cicalo has shown that the question of emphasis on either victimhood or resistance, in the development of a commemorative space around the archaeological discovery of a slave trade wharf and burial site in Rio de Janeiro's port area, was, around the time of my fieldwork, a very present discussion (2015). The references to slavery that I have noted here were fitting. The Jesuit estate of Santa Cruz was built upon slave labour (see Chapter 1) and, here, discussion of slavery in relation to the TKCSA was rooted in the specificities of the ways slavery and racism has come to be understood in Brazil. These statements may, for example, reflect the increasing recognition of the impacts of racism, as the myth of 'racial democracy' has been criticised by black activist and anti-racist movements and some social scientists (Fry, 2000; Guimarães, 2001), and there has been increasing uptake of arguments related to environmental racism in Brazil in general and, in particular, in relation to Santa Cruz (de Oliveira, de Castro and de Carvalho, 2011; Pires and Guimarães, 2016).

These discourses relating to slavery, in the context of industrial pollution and environmental conflict in Santa Cruz, illustrate recourse to narratives of victimhood and resistance. Campaigning residents used public understandings of slavery, as they drew parallels between their relationship with the TKCSA and the relationships between slaves and slave owners. The effect of linking slavery and the impacts of the TKCSA was to create connections between personal narratives of suffering related to the factory's presence in Santa Cruz and a greater sense of injustice. In this way they emphasised their suffering, the righteousness of their struggle and the hope that one day such a momentous fight would eventually be won. These appeals to slavery presented an image of the TKCSA engaged in such an extremity of violence that audiences are called to recognise it as such.

The illusive subject and the relationality of performance

A debate has arisen around Butler's approach to the agency of the subject. Critics of Butler's theory have suggested that her account excludes the autonomous subject, and subsequently, responsibility is disallowed when the subject is limited or non-existent (Butler, 2001; Lloyd, 1999; Webster, 2000). Indeed, it has been argued that authors using, adapting and developing Butler's theory of performativity have since over-emphasised the consciousness and intentions of the individual, reinstating the voluntarist subject that Butler disavows (Lloyd, 1999). In their investigations of performativity, and performance, some theorists using Butler's work have implied an ontological subject, prior to its negotiated cultural field, which is able to act according to its own will (Butler, 1990; Lloyd, 1999).

In the construction of victimhood that is evident in campaigners' 'emotive performance', the question of consciousness is also present. How much were campaigners aware of their emotion as an element of political strategy? This question brings up various sticky issues. It is both politically beneficial and problematic to claim that they were aware; while campaigners are imbued with more agency through the argument that the presentation of their emotions is strategic, it could also lead some to assume a kind of cynical manipulation of their

audience. Within this discussion one has to assess how much filmmakers and NGO workers talked through the aims of each campaign event with campaigners? How much access did campaigners have to other campaign materials or to events from similar campaigns? While I cannot answer these questions accurately for all campaign events, I do know that campaigners were aware of the objectives behind the film *Treliça* and that they understood that their roles within the film were to illustrate the negative impacts of the TKCSA as well as to persuade the audience of their severity. It is this point which is necessary to understand when thinking about the subtle change from performative emotion to a more theatrical and hyperbolic performance of emotion at campaign events.

However, here I want to suggest that the Stop *TKCSA* campaigners engage in performative emotion, and what I have labelled emotive performance, without relying on a pre-cultural, voluntarist subject, to describe the subtle shifts between the two. It is the discrete and bounded nature of the performance, its almost theatrical excess, the exaggeration and stretching of everyday performative emotion that differentiates between performative emotion and what I call emotive performance (Butler, 1993a; Lloyd, 1999). Everyday performative emotion becomes emotive performance when lawyers, foreign anthropologists and television news anchors arrive. Emotive performance can cause a close observer to wonder if it is 'real' – its discreteness, its regularity and its open clarity, created space for questioning its 'authenticity'. However, instead of questioning the 'authenticity' of this performance, I chose to look at it as a means through which campaigners make themselves accountable and ethically implicated in the lives of others (Butler, 2001).

It was months after my attendance at the first Stop TKCSA meeting (described above, in this chapter), while re-reading fieldnotes, that I realised that the accident that the fisherman had recounted during my first meeting, had occurred years before, during the construction of the TKCSA. When I discovered this, I began to question what I had seen in that meeting. Had this been 'real' emotion? Could this fisherman still be moved to tears, years after the events he described. Or was this

emotion 'performed' for my benefit? Were these campaigners consciously manipulating their own emotional responses for the benefit of an audience? Why were campaigners always so intensely emotional in front of such an audience? Why did this emotion not normally spill outside of these bounded acts? I have come to understand the issue of the 'reality' or 'truth' of emotion in the Stop TKCSA campaign, as unproductive. Instead, I turn to another of Butler's foci in order to answer my questions about the 'truth' of emotive performance; I argue that the shift between performative emotion and, what I call, emotive performance is a consequence of bodily vulnerability in coalitional protest (2015).

I follow Haraway's and Butler's discussion of the body as inherently constituted by, dependent upon, and in relation with, its environment, as well as human, animal and technical relations (Haraway, 2003, 2004a; Butler, 2015, 2016). It is with this premise that Judith Butler has argued that bodily vulnerability is a mode of relationality (2015). Protest is conducted in the context of social interdependency, and this implies dependency on infrastructure (such as pavements to march on or the Internet to communicate through or spaces in which to meet) and social webs of relations (Butler, 2015). It is this relationality in protest, I argue, that dictates when it can be agentive to perform victimhood through emotion. In Santa Cruz, when NGO staff members brought with them lawyers, sympathetic politicians or representatives of international NGOs, campaigning residents recalled their most emotive memories and performed their most emotive victimhood. The audience, the cameras and the recorders were 'infrastructures of support' and all contributed to the possibility for these campaigners to perform victimhood and thereby to resist. As Butler argues, the infrastructural support and the supported and agentic body are both implicated in political mobilisation (Butler, 2015). Campaigners mobilise their 'vulnerability' and ultimately their 'victimhood' when the conditions surrounding them make it viable and even *potentially* effective.

Both performative emotion and what I have termed emotive performance are political agency that is inseparable from the dynamics of power through which they emerge (Butler, 1990). The constitutive power of emotive performance is more

available, and potentially more effective, in certain settings and in the company of certain people. The film 'Paris is Burning' makes clear that performance is not always subversive, nor is it subversive in all contexts or with all audiences (Harper, 1994; Lloyd, 1999). I was once enjoying a beer with the daughters and neighbours of a friend and informant (here I call him Luiz) sitting on the pavement outside his house. My friend Luiz turned up, on his way to being inebriated, and started an emotive speech about the hypocrisy of a community football project, which was supported by the TKCSA. He waved his arms around while he spoke loudly and with a sense of urgency, pointing accusatorially at the factory, and shaking his head with indignation. This behaviour lasted for some time, and through its volume and its accusatory intonation, his voice challenged his neighbours to think the same as he did. While he talked, his daughters and their neighbours began to raise their eyebrows and shake their heads. One of them lifted her arms and slapped them back down on her thighs, in frustration at Luiz. I wondered if this was because he was slightly drunk and they disapproved. That probably was part of it, but as he left they began to exclaim that Luiz was annoying because he was always complaining about the factory. Why did he have to talk about it all the time, they asked, tutting and shaking their heads. Here we can see that the conditions and audience for emotive performance must be present for it to be *potentially* effective and when they are not present, mobilising vulnerability can be individually, and perhaps collectively, counterproductive.

Conclusion: Emotional politics

In this chapter I have followed emotions, related to the TKCSA, in everyday situations and in the Stop TKCSA campaign. Manuel Tironi has asserted that intimate acts of care, such as the care for a garden blighted by industrial pollution or for a dying husband poisoned by particulate matter, can be political acts in the sense that they interrupt industrial harm (2018). The political power of these activities rests on the ability to preserve ethical ways of being in the face of extreme suffering (Tironi, 2018). Similarly, I argue that the political power of the quotidian expression of feeling, in relation to the factory, was to be found in the encapsulation of emotion and the preservation of perseverance in the face of toxic suffering.

Emotive performance in the campaign against the TKCSA was more obviously political. It was an element of campaigners' attempts to give an account of themselves, to be accountable to others, and to be *responsible* in a moral sense (Butler, 2001). Their narrations were always partial and always undergoing revision. In the film, and other campaign events, as in everyday conversations, people I knew expressed emotions such as anger, frustration, sadness, hurt, desperation, shame, agitation, and cynicism. In their emotional performances campaigners called audiences to action and expressed an overwhelming desire for a response from the company and the governing authorities. Residents' emotive performances mobilised agentive victimhood, as part of bodily vulnerability in protest. They made use of the available infrastructures of support to call for help and for change.

In the next chapter we shall see how the emotion involved in the environmental conflict surrounding the TKCSA was fundamentally relational and examine some of the ways it impacted on families, friendships, and institutional relationships.

Chapter 11. Support

Introduction

In previous chapters I have discussed the complaints that people living around the TKCSA had about the steel mill, I have covered some of the company's approach to communicating with its neighbours about those complaints, I have addressed different currents of blame surrounding the factory and I have examined the place of emotion in responses from people living around the TKCSA. This chapter documents how the impacts of environmental conflict in the João XXIII area of Santa Cruz were relational. I argue that the material and emotional impacts of the environmental conflict in Santa Cruz reverberated through the very relationships that were built up around them. Even those relationships that were based on the idea of support for campaigners against the TKCSA, were marked by some tension. I focus on these relationships as examples of a wider system of relationships that developed around the issues posed by the TKCSA.

In this chapter I examine different sets of relationships that were either built around, or included a focus on, environmental health in the context of environmental conflict, in the areas neighbouring the TKCSA. The core relationships I discuss are some of those that occurred within the Stop TKCSA campaigning group, between Stop TKCSA campaigners and the NGO staff that supported them, between local residents of the João XXIII region of Santa Cruz and staff at a local State-run health clinic and between campaigners and myself. I argue that across these relationships we see the impacts of environmental conflict on emotional-relational processes. I have discussed, in the introduction to this thesis, how emotions are contextual, collective, and productive. Feelings emerge as part of the messy experiences of life, they develop through, and come to define, group identities and they shape the world around them (Ahmed, 2001, 2004, 2014a). Here I look at the specific impacts of emotion associated with the presence of the TKCSA, on relationships that developed around the steel mill. I argue that relational challenges established themselves through the prism of mismatched expectations. These mismatched expectations are an important element of the environmental conflict itself and

should be seen as such. It is by understanding interpersonal and professional conflict in this setting as integral to the environmental conflict over the TKCSA, that we can view these relationships and relational challenges without blame.

Stop TKCSA and NGO support

As I spent more time with members of the Stop TKCSA campaign I came to see it as a space of mutual, emotional support and shared resilience. Friendship and care were evident in the occasional social events organised around different elements of the campaign. I gleaned this after a short time attending events such as a BBQ lunch after a meeting or a café meal after a fishers' protest. It was clear that Stop TKCSA members had relatively intimate knowledge about each other's lives and this would come out, for example, in relaxed group conversations on the various bus journeys to campaign events. Similarly, before meetings, as campaigners gathered, conversations about life events would abound. Responses in interviews further highlighted for me, the importance of a sense of mutual care amongst members of Stop TKCSA. I wasn't surprised by this, as ties of friendship and mutual support in social movements and activist groups are relatively well documented (Taylor, 1989; Jasper, 1998; Yates, 2015). However, as I got to know campaigners better, I understood some of the complexities of these relationships. I have discussed (in Chapter 4) the argument between Stop TKCSA members about differing approaches towards militia threats. I also learned that some of the campaigners were more comfortable when events were held in halls and event spaces, rather than in each other's homes, because of previous disagreements in which some families of campaigners had not felt welcome.

The NGO, *Instituto Políticas Alternativas para o Cone Sul* (or PACS as it was commonly known in Santa Cruz), had been working on the campaign against the TKCSA since its beginnings. While I was in the area I observed them help organise and carry out a number of events relating to the campaign. Of the many events that they organised or were involved in, the following are a small selection; a talk on Sepetiba Bay's history as a healthy retreat destination, an exhibition of photos relating to impacts of the TKCSA in Santa Cruz, meetings with reporters, a tour of

the area with representatives of the Order of Attorneys of Brazil (OAB), and a protest in central Rio de Janeiro against the barrier built across the Canal São Francisco by the Association of Companies of the Industrial District of Santa Cruz and Adjacent Areas (AEDIN). PACS members came to, and facilitated each meeting in Santa Cruz, doing a lot of reporting back on work they were doing in relation to the campaign against the TKCSA. They commissioned a film (Instituto PACS, 2016a) they wrote, directly supported, and contributed to the writing of academic articles on the subject and they have produced a number of comprehensive reports based on their own research into the TKCSA (Kato & Quintela, 2012; Mesentier & Lima, 2013; Instituto PACS, 2015). PACS were heavily involved in the environmental conflict surrounding the TKCSA and had years of experience of working with campaigners to support their work against the company, liaising with other interested parties and exploring potential avenues through which the campaign could keep going. During my stay in Santa Cruz, I was very much aware of the political integrity, care for campaigners, and careful thinking and planning that went into PACS' work. Since I have left Santa Cruz, I have become increasingly conscious of the sheer resilience of PACS' staff; they appear to have been one of the few groups to have maintained a consistent, continued focus on the issues associated with the TKCSA.

However, the extremity of the situation in Santa Cruz created tensions that I became aware of, during my fieldwork, around the work that PACS and the Stop TKCSA group undertook. A recurrent theme in conversations with one friend (here this friend will be referred to as Lucas) who worked on the Stop TKCSA campaign revolved around mismatched expectations in his relationship with PACS. Lucas had been involved with the campaign since its inception. He took on many roles, linking the Stop TKCSA campaign with PACS, and he had clearly made himself fundamental to many of the events that were planned. For any campaign event Lucas might garner interest in the area, encourage people to attend, and find local people who could inform visitors. He knew where 'important' visitors should be taken to give them the best view of what could be seen (black residues on river rocks, damaged mangrove, or the barrier across the São Francisco canal, for

example) and he organised fishers to take visitors out into Sepetiba Bay. He had also endeavoured to show me these things. All these efforts took time, energy and sometimes seemed to cause not inconsiderable stress for Lucas. I believe that Lucas came to see himself, through his work with PACS and his efforts in the struggle against the TKCSA, as both indispensable and under-valued.

Lucas's income as a fisher had, he said, been substantially impacted by the presence of the TKCSA (see Chapter 7 for fishers' complaints about the TKCSA). He often told me that he was short of money and in the lead up to a campaign event he would start to express frustration that he was undertaking a lot of free labour. Lucas suggested on more than one occasion that PACS should pay him for his contribution to the smooth running of campaign events. Sometimes he seemed to be saying this as though perhaps, if I talked to PACS about it, they might listen to me. I occasionally felt the need to remind him that I was in Santa Cruz independently of PACS and held no sway over their actions.

Once, late in my time in the João XXIII area, when I went to Lucas's house to catch up with him, and to discuss if he was going to attend a 'Stop TKCSA' meeting the next day, he was not there and his family invited me in. It seemed that Lucas was out organising boats for various excursions for the campaign event that I had wanted to speak with him about. Lucas's family told me that they too were not pleased that Lucas was spending 'all his time' on the 'Stop TKCSA' campaign rather than other things. His wife and daughter told me that PACS should pay him, and that if they didn't, he should stop getting involved. They said that 'it had been a long time now' and detailed some of the things Lucas could be productively spending his time on, which they felt were being neglected because he was 'doing so much *for* PACS'. I suspected that they might be hinting that perhaps I should talk with PACS, or with Lucas, about Lucas's involvement, or that perhaps they were requesting that I should not add to the pull on Lucas to be involved in the campaign. I suggested that Lucas needed to talk to PACS about this issue if he wanted remuneration for his efforts but mentioned again that I didn't know anything about PACS approach to paying activists.

In my contact with people working for PACS I learnt that they too had some misgivings about the elements of the way in which the campaign was going. This had some implications for the way I viewed the relationship between campaigners and NGO. In one conversation with a worker at the NGO (let us call him Marcos) he mentioned his unease that the Stop TKCSA members were appearing to need more leadership than the NGO endeavoured to offer. He said that the meetings could sometimes appear to be PACS meetings in which residents participated, but that the opposite should be true. It was, he claimed, the residents' role to push the campaign forward and PACS should offer resources in a supportive role. Marcos explained that it was important that the impulse behind campaign events should come from residents of Santa Cruz. He seemed, at points, frustrated during this conversation, apparently at the loss of interest from those people living in Santa Cruz who did not form part of the campaign.

While talking with Marcos about the lack of mobilisation of residents in Santa Cruz, and while suggesting reasons why more residents and younger people were not getting involved, the gravity of mismatched expectations occurred to me. Marcos explained that the role of the NGO was to hold space for, and support, the capacity of residents to critically analyse the situation themselves, so they could go on to be the force behind the campaign. There was a difference here between the aims behind the work of Instituto PACs and the hopes of residents and campaigners, that the Stop TKCSA campaign could provide material results in their lives (like the removal of the steel mill, securing reparations or the relocation of residents). I suggested that one reason why more residents did not attend meetings might be that they had seen that the meetings were more about trying to develop a social movement in response to the TKCSA and less about providing support for the residents who wanted financial compensation so that they could relocate or who wanted legal recourse to change the situation in Santa Cruz. I explained that I felt that residents knew that what was happening in Santa Cruz was wrong, but they also knew they didn't have the power to change it. It wasn't that residents were not motivated to play an active part in the struggle against the company, it was that

they had seen that that struggle had not been 'working' and had judged that attendance at meetings might provide little benefit to them or to their community. This was the impression that I had gathered from responses to my questions about why some of my friends did not attend Stop TKCSA meetings; shrugged shoulders, sighs, and a turn of phrase that invariably meant, 'what's the use?'.

Through these example conversations we see an NGO worker attempting to understand why residents of Santa Cruz weren't more involved and a local resident of Santa Cruz who felt that he was under-valued and that it should be the NGO's role to recognise his work. Social scientific study of divergent understandings between NGOs and the publics they attempt to serve, abound (Benson, 2012; Hviding, 2003; Swidler & Cotts Watkins, 2017). In Santa Cruz these mismatched expectations are particularly important as they may have contributed towards stifled progress and the reduction of involvement in the campaign against the TKCSA. However, I argue that mismatched expectations were likely, if not inevitable, in this type of environmental conflict. Rather than understanding them as merely a result of misunderstandings, or worse still as wilful disregard of each other's expectations, I understand them as emotional-relational outcomes of the struggle against the TKCSA. The size of the company involved, the socio-economic position of most people living in the João XXIII area of Santa Cruz, the involvement of the militia, the waning interest in the campaign and the various 'lost battles' along the way[43], made it predictable that members of the NGO supporting the campaign might be left wanting more input from local people and that individual residents undertaking a lot of the local logistical and organisational labour behind campaign events, might want more recognition for their work. These were the emotional-relational impacts rumbling under the surface of the conflict with the TKCSA.

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[43] The floods of the São Fernando residential area and the imposition of a barrier across the Canal São Francisco serve as examples of elements of the conflict surrounding the TKCSA, which had not been resolved in a way that was thought to have been beneficial to residents.

'Co-responsibility' and the clinic

When I began to talk about health with people living in the João XXIII region of Santa Cruz, I started to notice that there were some points of contention between people who raised health concerns that they attributed to living near a large steel factory, and the approaches of local state-run health facilities in the area. A complaint came up frequently that doctors from local clinics did not provide reports documenting the cause of any of the health problems that local residents were experiencing.

One person I interviewed on the João XXIII main road said,

"they don't give even one document that confirms that it is the dust from here that endangers our health. My mother is 84 years old and her skin is all dry from so much itching. She itches a lot. Her eyes are all dry. It's like this, the doctor says 'use a lot of saline, as well as the medicines that you are used to using' and he doesn't resolve anything. There is not one doctor who will give a report that explains that it happens because of the CSA, but after the CSA the people started to have a lot of health problems, allergies, bronchitis, in the skin…"

When I asked another person if they had been to the local clinic to deal with their health problems, they said,

"Ah, I don't go there, no. Because I want medical documentation and they don't give any. They don't ever give medical reports. My mother has this problem of a cough, she coughs and coughs and coughs. They are never going to give a medical report documenting why she is coughing, because of this soot, because of the dust from the CSA. They will never give out medical reports saying what it is. So, why should I go there? I don't want only the treatment, I want to know what the cause is. I have lived here for thirty-three years and I never had this. I want to know what is causing it; what is causing the rash my daughter has, what is causing the cough my mother has. They don't give medical reports here. Not here [the local clinic], not in the UPA on João XXIII and not in the Hospital Pedro II".

Yet another person said,

"I think it all has to do with the pollution. Sometimes I have this fear that I have something wrong with my lungs, but they don't refer me at all. I did two x-rays in the UPA and they said that I don't have anything, my lungs are clear. But the X-rays stay there, they aren't allowed to leave. The doctors don't give them to you. They look at them, and they stay there. You don't have the right to bring them home, to give them to another doctor. They stay there. They tell you that you are ok, and they send you home. Entendeu? It is this that we are living here. I don't know. We don't trust them. I don't know, I have... I'm going to be sincere. I think that the UPA is manipulated by them there [pointing to the TKCSA], and they don't tell us everything about what we have. So much so, that it is, an injection and then off you go home. They don't have the medicine to treat our problem, they don't. They don't have it because there just isn't a way, there is no solution, entendeu? We have to live with this pollution and the luckiest one will survive. And whoever isn't lucky, will go on losing their health… The very same doctors from here [pointing to the local clinic] don't refer us to the hospital. So when you have a crisis [puts her hand on her chest], it is better to stay alone in the house, with a lot of water. It is no use going, because you are given an injection and they send you home."

It was clear that many residents felt that clinic staff should, not only provide treatment, but also medical documentation that would divulge the causes of their conditions. The fact that this type of service was not forthcoming left people, who were feeling health impacts that they associated with the TKCSA's emissions, ready to alter the ways they interacted with local health services. The inability, or unwillingness, to provide this kind of report, may have been the result of various factors. Perhaps it was simply that staff considered this kind of function as outside of their purview and realm of experience. Perhaps it was, in part, a result of the 'judicialisation of health' in Brazil, which has seen a particularly steep rise in health-related legal cases (Biehl et al., 2012; Aureliano and Gibbon, 2020), which could have led to caution amongst clinical staff.

There has been a lot of work on 'contested illnesses' that has examined the struggle to get environmental illnesses recognised, diagnosed and treated (Kroll-Smith, Brown and Gunter, 2000; Brown, 2007; Brown, Morello-Frosch and Zavestoski, 2011). Part of this picture is physicians' unwillingness to make claims for direct links between exposure to toxicity and illness. Phil Brown and Judith Kirwan Kelley, for example, have found that, in a North American context, people accessing medical services for environmental disease often expected doctors to adopt a role closely associated with public health action (2000). At the same time, physicians practicing in areas affected by hazardous waste sites, were not more likely to perceive environmental health hazards as particularly important (Brown and Kelley, 2000). This suggests a lack of emphasis on the possible environmental causes behind illness. Brown has called for a more humane and patient centred healthcare service, arguing that this will depend, not solely on improved dyadic relationships between patient and doctor, but also on an approach that renders clinical medicine more responsive to environmental health concerns (Brown, 2007).

I too want to acknowledge the importance of efforts to recognise the *causation* of illnesses, especially in the context of environmental conflict. In Santa Cruz I heard, time and again, of the importance of this for individuals experiencing symptoms they associated with the TKCSA. In group interviews at the local state-run clinic, staff affirmed their belief that the illnesses and conditions they were seeing occur at increased rates, may have been the result of pollution from the TKCSA's operations. However, when clinic staff referred to the impacts of the TKCSA they emphasised their inability to be certain of the link. One Community Health Worker, for example, said, "Another factor that we can observe, is that if we jump ten years back? There weren't so many incidences of cancer here. Now, from 2010 to now? It has exploded. We see so much of it. But also, one can't be sure of anything – there is no foundation to that either." Similarly, a doctor told me, "We don't have anything that can prove that this is because of the pollution from the CSA. It is something that we believe, ne? We think it is. The most appropriate thing to do would be to do a study proving that this is happening because of the pollution... I

observed an increase in cancer in my area. I can only talk about my area. In my area it was striking..." These staff members were reminding me that there was no clear evidence for claims that this perceived 'explosion' in rates of cancer diagnoses in the area can be linked to the opening of the TKCSA in 2010. A couple of studies have been undertaken which showed that substances were emitted by the TKCSA into the air; these studies outlined various conditions and diseases suffered by people living near the TKCSA and argued that the particular type of pollution emitted by the factory had, elsewhere, been shown to be linked to increases in particular forms of cancer (Porto et al., 2011b; Dias et al., 2014). While the staff members at the clinic where I worked were careful not to insist on a direct causal link between the pollution they believed was present and the illnesses that appeared to have increased among their patients, they expressed the belief that this connection could be made.

As noted in work focusing on contested illnesses, documenting links between pollution and ill-health can be challenging for a variety of reasons (difficulty measuring exposures, exposures to multiple environmental agents, resistance to looking for environmental factors, critiques from 'mainstream researchers' etc) (Brown, 2007). This is well documented in ethnographic studies (Little, 2016; Lora-Wainwright, 2010; Shriver & Bodenhamer, 2018). However, I want to make a different point here. I am interested to highlight mismatching expectations of health services, in the context of environmental conflict, and the way that this surfaces in relationships in the areas neighbouring the TKCSA.

Patients' annoyance at the lack of medical reports stating the links between pollution in the area and illnesses can be set in a context in which clinic staff were lamenting the increasing paperwork required of them. Nurses explained that, after a considerable amount of money was allocated to the 'Planning Area 5.3'[44], they were required to complete more paperwork to illustrate improvements to the reach of the clinic's services.

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[44] Since 1992 Rio de Janeiro has been divided into five planning zones that are, in turn, split into administrative districts (O'Hare and Barke, 2002). This zoning is used in the administration of the healthcare system in Rio de Janeiro.

"Numbers! A lot of numbers! The bureaucratic part, today, is much greater than it was when we started. Before, we worked a lot more in patient care… The thing is, it's like, a bit wasteful, entendeu? We liked it before. Or, it isn't just that we liked it better, it is about what our purpose is, ne?... These days we are overwhelmed. That is what we say. We say that a lot. Why? Because we spend more time with paper, justifying things, than giving attention to our patients".

Similarly, Community Health Workers noted that their work had become more bureaucratic.

"We lost our focus, the focus at the beginning was our work on the street. That is what we did. We could learn about the health complaints of people and pass that to the doctors… The focus of the health programme was the health of the family, it was families. You, the agent in the street, didn't leave the problem there, to arrive here, you got yourself orientated in the house, you listened, looked at the hygiene of everything… But it lost that. Now, it is numbers. We need to do the numbers. It lost this focus, the Family Health Programme[45]".

The paperwork described here did not refer to the documentation of illness causation, rather it was documentation of the activities of clinic staff. While staff were generally in agreement that it was necessary to document work they undertook, they argued that this had taken them further away from their preferred 'purpose'. More time filling out forms, led to a reduction in time spent directly assisting patients. These complaints from staff can be taken to suggest that the official documentation of environmental causes behind patient illness, and the challenges entailed, may have fallen outside clinic staff understandings of their purpose.

However, as I began to work at the clinic a different picture emerged, beyond these concerns about the difficulties of *proving* causal links or the increasing bureaucracy of healthcare. At the clinic I observed the clinical staff taking a great amount of care over the health outcomes of their patients, and their dedication to their work was indicative of that. Staff wanting to spend less time documenting visits illustrated the desire to provide the best face-to-face support possible for their patients. However,

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[45] *Programa Saúde da Família* (PSF)

I increasingly identified mismatched expectations between patients, requesting written evidence for the links between TKCSA pollution and ill-health, and clinic staff, who emphasised 'co-responsibility' ('*co-responsabilidade*'). Staff introduced me to the concept of 'co-responsibility', explaining that the nurses have the responsibility to see patients, offer information and refer patients if necessary, while patients have the responsibility to take medication, follow the orientations given and attend any appointments made. Nurses acknowledged factors that made it difficult for the population to 'take responsibility', mentioning that the areas where patients live are 'distant' and 'deprived'. However, these factors were presented alongside their feelings of dissatisfaction that they were forced to play 'child-minder' (*babá*) to patients who they suggested weren't playing their part in this 'co-responsibility'. One nurse said,

"We end up turning into child-minders... It shouldn't be like that. So it ends up being tiresome for me. Ah, she missed her pre-natal appointment, we have to go there, the same day or within 24 hours, to know why she missed it, to re-plan the consultation. She misses it again, you have to go to her house again. So, it ends up being tiresome, because they should have some co-responsibility. The co-responsibility of the patient..."

Conversations about 'co-responsibility', or even more general conversations about what 'health' is, often slipped into discussions of how the local population didn't take responsibility for their own health. Here I include an excerpt from an unstructured group interview with Community Health Agents.

Community Health Agent 1: "*You arrange an appointment, and the person lives right here, down the road, and they don't come. You find that person in the supermarket at the time of their appointment. The person lives here, right next to the posto and they don't come. So, the person doesn't believe that having 'health' is, having a clinic nearby, offering you a specialist that you don't have the means to pay for. Então, it depends a lot on the culture of the population. What you understand 'health' is, entendeu? It is very complicated.*

Delia: *Tá. And what do you think the population here, thinks 'health' is, then?*

Community Health Agent 1: *They only criticise, they only speak badly.*

Community Health Agent 3: *They blame the system. It is easy, being human - but I am not going to blame someone else for something I was responsible for. It is easy to point the finger. Então assim, the system doesn't function one hundred percent, it won't anywhere, but they are ill because they look to be ill. But am I going to blame someone else, and say that it was the posto? That the result of my test came back late, or that they were late to arrange an appointment? I am not going to understand that I stopped doing so many things, so that the illness could appear, do you understand? So, they have this way of thinking. It is always blaming, blaming. Always attacking the other, and claiming they were responsible for something.*

Community Health Agent 2: *They don't understand, like he was mentioning, that health is also, avoiding alcoholic beverages, a balanced diet, eating healthily. And I think that it isn't because they don't have money. Because don't they have six R$ for a bottle of coca-cola? And a beer? I don't even know the price of a beer, but it has one. They have money enough to buy a cigarette? All this, that I have spoken of, harms health. If they had a culture of, instead of buying a coca-cola, a beer, a cigarette? Buy healthy food, vegetables, pulses, a juice.*

The idea of 'shared responsibility' features in the Brazilian Unified Health System's 'Family Health Strategy' (ESF), which states that the responsibility for care is shared between families and health professionals (Fiocruz, n.d.). 'Co-responsibility' was explored in the 2006 National Health Promotion Policy of Brazil's Unified Health System (de Carvalho, Westphal, & Lima, 2007; Ministério da Saúde, 2006; Traverso-Yépez, 2007), which describes a shared responsibility for "the quality of life of the population, where all participate in protecting and caring for life" (Ministério da Saúde, 2006). These official documents go on to designate the responsibilities of the national, state and municipal levels of government as well as the responsibilities of the healthcare professionals working at family clinics (Ministério da Saúde, 2012). The Unified Health System's 2011 document, which sets out the rights of service-users, also explains that all citizens have responsibilities to ensure that their treatment is adequate (Ministério da Saúde,

2011). What the 'responsibility' of the patient consists of is left very vague (Gelinski, 2011). In conversation, clinic staff understandings slipped from the idea of patient responsibility to attend arranged appointments and take prescribed medicines as indicated, for example, to an understanding that emphasises the responsibility to live in a 'healthy' way. Meanwhile, many local residents appeared to believe that clinical staff had an unfulfilled responsibility to state what the cause of illnesses were and felt aggrieved that this 'responsibility' was being overlooked.

Some of the reactions of clinic staff to discussions around health and responsibility, suggest that some discontent had arisen in relationships between clinic staff and members of the public. The underlying concerns of clinic staff, about relationships with members of the public were highlighted for me in two conversations I had with team members. When out for household visits with José, a Community Health Agent, I noticed that when no-one answered the door to us, he made sure to note down that he had attempted a visit. Community Health Agents had previously mentioned that they needed to document their visits with patients. On this occasion, José put it slightly differently. He said that he needed to record his visit, so that if something happened to the patient in question, at a later date, he would be able to point to the records to say that he had done his best to visit them. I interpreted this as pointing to a possible institutional culture that required that members of staff attempted to avoid potential future blame.

Similarly, close to the beginning of my time in the clinic I was called in for a discussion with one of the clinical team. He explained that he had decided that he didn't want to take part in my study. He later sent me an email that explained why. In his explanation he stated that,

"I do not want, nor do I need, that part of the population has reason (even if not based on reality) to issue complaints about me. I've had countless examples of users wanting to demand documents from us (for example) that we can't provide. In case of doubt, I am sure that our obligation is to avoid such situations".

This member of staff suggested that he felt under scrutiny, that he had received complaints from patients in the past, that he had previously refused to supply written documentation (which could refer to written reports documenting causation of illnesses) and that he felt more comfortable avoiding such situations. In both of these conversations I noted that previous relational break-down with patients, and fear of potential relational problems with patients, affected the professional conduct of these two members of staff. As mentioned above, perhaps this is a knock-on effect of, or the internalisation of, the 'judicialisation of the right to health' (Biehl et al., 2012) into institutional cultural understandings, illustrating professional prudence where it is perceived to be needed. However, what is of note in these cases is the relational production of negative feeling between patients and staff members. In the case of the clinical team-member's email, we can see what is, possibly, the emergence of issues directly related to the presence of the TKCSA. Patients expected to have the place of TKCSA-related pollution acknowledged while doctors seemed to think this was outside of their professional competence and clinic staff emphasised a lack of patient responsibility in the maintenance of health, despite understanding that factors such as ambient pollution might impact patient health. These mismatched expectations may also be a symptom of communicative inequities, through which patients' efforts to communicate expectations and knowledge about ill-health may have been undervalued or rendered invisible (Briggs, 2017). Here, however, we see that conflict, directly related to the pollution in the air, was not restricted to conflict between company and members of the public. Instead, we see how the toxicity of ambient pollution was mirrored in, and spread to, the interpersonal and professional relationships that grew up around it.

Anthropologist
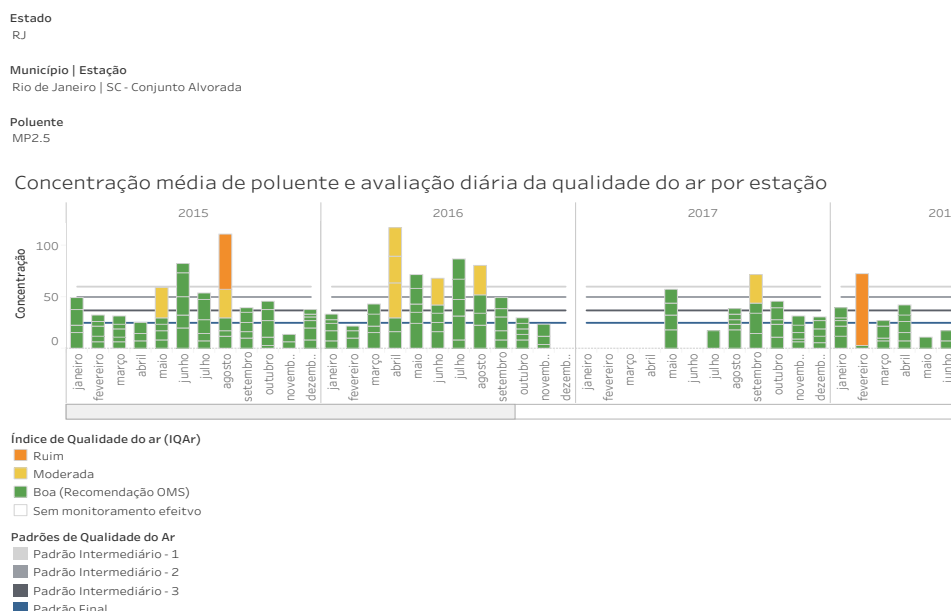
The relationships built up around the environmental conflict surrounding the TKCSA included those that I was involved with. I was concerned, from the beginning of my time in Santa Cruz, to try to make sure that expectations around what I would be able to contribute to the campaign, were realistic. The campaigners in the João XXIII region of Santa Cruz were experienced in dealing with people

'coming in from outside', showing interest in the problems surrounding the TKCSA factory. Perhaps, if anything, the people involved in the Stop TKCSA campaign thought of me as another element, adding weight to their claims, and visibility to their struggle. Other than that, I am quite sure that campaigners themselves had very little expectation, if any, that I would be able to directly contribute, in any way, to the campaign's success.

However, before going to Santa Cruz for the first time, I had some expectations about what I would be able to achieve. Of course, I understood that I wasn't going to be able to influence the core conflict surrounding the TKCSA, but I had hoped that I might document it in a way that could be, at least in some small way, useful to the people involved in the campaign. To this end, I undertook some research into 'citizen science', looking for ways to measure particulate matter and to discover what the dust surrounding the TKCSA contained. I knew that these things had been measured in Santa Cruz before; the Oswaldo Cruz Foundation had analysed the dust present in Santa Cruz and had included a break-down of the metals it contained in their reports (see Chapters 6 and 7 for a discussion of this) (Porto et al., 2011a; Dias, et al., 2014). There were static PM2.5 measuring stations around the João XXIII area of Santa Cruz (including in the school in the Conjunto Alvorada, where I volunteered). The monitor in the Conjunto Alvorada began collecting information regarding Total Suspended Particles in 2011 and PM2.5 concentrations in 2013 and began to collect monthly data in 2015, the year I was in Santa Cruz. During this time there were clearly breaches of Brazilian air quality standards (see the data below).

Table 1. The average concentration of pollution, by month, at the air quality monitoring station in the Conjunto Alvorada.

Estado
RJ

Município | Estação
Rio de Janeiro | SC - Conjunto Alvorada

Poluente
MP2.5

Concentração média de poluente e avaliação diária da qualidade do ar por estação

	2015	2016	2017	2018

Concentração — 100, 50, 0

janeiro, fevereiro, março, abril, maio, junho, julho, agosto, setembro, outubro, novemb., dezemb.

Índice de Qualidade do ar (IQAr)
- Ruim
- Moderada
- Boa (Recomendação OMS)
- Sem monitoramento efeitvo

Padrões de Qualidade do Ar
- Padrão Intermediário - 1
- Padrão Intermediário - 2
- Padrão Intermediário - 3
- Padrão Final

(Instituto de Energia e Meio Ambiente (IEMA), no date)

My doing similar things (albeit in a more 'do-it-yourself' fashion) did not promise a great contribution, but I felt that the Oswaldo Cruz analyses could be updated (considering the TKCSA claimed that the dust was no longer an issue) and any new data collected collaboratively with people living locally could be more accessible than the data from the static PM2.5 measuring stations around the factory. I quite quickly learned that whatever I was going to be able to do was going to fall far short of 'citizen science' because of the limits of my own skills, experience, and time. I have since understood, that it had been quite likely that I was going to find it difficult to develop a plan for such a project that would reach some of the expected standards for 'citizen science', including involving local people, generating a genuinely scientific outcome and ensuring it would benefit the people taking part (Robinson *et al.*, 2018). In retrospect, it is interesting that I found this type of data collection to be so important. Since returning from fieldwork, at a

couple of presentations of my work, in conferences about extractivism and environmental conflict, audience members suggested I could have collated this kind of 'scientific' data illustrating the presence and make-up of the dust. Considering how little effect any other more 'scientific' data that was collected and written about, seems to have had on the situation in Santa Cruz, I would now question the idea that it was necessary for me to get involved in.

The problematics of the pull towards materialising chemical exposures have been noted (Shapiro, Zakariya and Roberts, 2017; Liboiron, Tironi and Calvillo, 2018). The ways in which scientific evidence may or may not be successfully instrumentalised in efforts to change specific situations involving pollution or toxic exposure have also been well documented. Michelle Murphy's investigation of Sick Building Syndrome (SBS) cites various ways in which efforts to draw out some change, from evidence about SBS were impeded (2006). Murphy posited, for example, that an anti-regulatory ideology common in Reagan-era US provided the context in which SBS was seen as needing assessment rather than regulation. Similarly, building consultants' emphasis on SBS's multiple and indeterminate causes diminished the possibility of corporate responsibility, and gendered understandings at the time allowed women office workers to be dismissed as suffering from 'mass hysteria' (2006). Max Liboiron has asserted that the evidence associated with the harms of polluting plastics is difficult to discern and articulate clearly enough for action, because of the specificities of the materiality of plastics (2016). For example, the chemical effects of plastics at low doses and their ability to blend with other systems (such as endocrine systems in bodies) mean that they are difficult to measure. According to Liboiron, "the problem, then, is not lack of correlative evidence for health effects. The problem is that the evidence does not provide a clear, decisive picture of which plasticizers produce which effects, at what levels, and whether these effects can be called harm" (2016, p. 98). There are many challenges in the movement from research and results to action and change, and as both these authors have claimed, the issues are to be found in the minutiae of each case. Why, given, the lack of concrete changes arising from previous materialisations of exposure to particulate matter in Santa Cruz, did I feel the need

to privilege this type of data? I now find these questions have been further compounded by how unsuccessful my foray into this field was.

However, by the time my fieldwork had started I had decided to go ahead with this type of work and had read about various projects that had collaboratively collected data relating to environmental risks and hazards. At that time, it seemed that there were not many machines, available and cheap enough to be purchased, that could measure particulate matter. After some research it seemed that self-build machines, to measure particulate matter in the air, were sometimes successfully used in citizen science projects. I searched the internet, which seemed to provide a variety of different plans for simple self-build machines, looking for a simple design. I quickly realised that this was very much outside my skill set and decided that I was unable to build my own pollution monitor. After contacting various companies, whose machines were far too expensive, I settled on purchasing an AirBeam, which is part of a project called 'Habitat Map' (Heimbinder, no date). The AirBeam allows the user to 'cast' their measurements onto an open access, online map. I felt that this automatically changed the project from a 'collaborative' one, to one that I would have to undergo on my own. I didn't want to be responsible for encouraging others to participate in something that might then be traceable in case the militia were to somehow find out and become involved. It became clear that this would be a 'side' project and as such, I could be more relaxed about not following the steps[46] that might be necessary in a more meaningful study.

Having bought the machine I realised that there were still some issues that remained unresolved, and that I felt under-equipped to assess. What methodology was I going to use to produce data that was at all meaningful? For example, would it be better to move around with the machine or measure one fixed point over time? Or should I move the censor between a few different sites for longer periods? Should the censor be placed outdoors or indoors? When I took the AirBeam to a 'hack' conference at a 'make space' in Rio de Janeiro, it was strongly suggested to

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[46] Such steps might include forming more intentional partnerships and identifying 'stakeholders', defining goals and developing hypotheses etcetera (Barzyk *et al.*, 2018)

me that I lacked a 'methodology' and that I should have developed one before starting to experiment.

Figure 20. AirBeam machine to measure particulate matter in the air.

In the end, the AirBeam was to present all sorts of difficulties for me. After spending some time dithering about it, and after the machine spent a long time in transit, it only arrived in Brazil three months before I was to leave. I hadn't realised how difficult it would be to get it sent to the country; this involved months of waiting, lots of form filling, significant amounts of taxes to pay and a six-hour round-trip into central Rio de Janeiro to pick up the machine. Once it was in my hands, I realised that I was going to find it difficult to run – partly due to my own inadequacies with technology and partly because, at the time, on top of all the other things I was doing, I didn't have the time, energy or patience to work it all out. The AirBeam seemed to turn itself off a lot, and I was unsure if this was because of the heat. With this in mind, I hung the AirBeam by a window, in a position that appeared to me to be somewhat precarious, using plastic packaging ties. It seemed that some of the difficulties associated with the censor occurred because I was using it in a slightly different way to what had perhaps been envisioned, when it was designed.

The original AirBeam was designed to upload data directly to an online map, but because I didn't want that to happen (for reasons of security), I had to collect the data in a different way. As far as my partner and I could work out, this required an old smart phone, a Google Drive account and a laptop. It was a convoluted process that took a long time. The information gathered by the AirBeam couldn't be moved while it was still collecting data, so the plan of continuous data from a fixed place became unfeasible. When the data was finally transferred over to the computer it appeared to be too big for Microsoft Excel to handle. All of this might have worked for a 'tinkerer', but I just wanted something that would be straight forward and that I could be taught how to use.

As I got more and more bogged down in the difficulties this machine presented, I handed more and more of the responsibility for its maintenance to my partner. I justified my reliance on him with the idea that, because he was a computer programmer, he would have a better honed capacity to work out how to use the technology. I had got to a point where, in the context of everything else I was trying to do, I just couldn't take on this machine. While my partner was extremely gracious about it, he had, by this point, been landed a job that he hadn't signed up for when he came to Santa Cruz to be with me. He not only took on the responsibility for making the AirBeam work, he also took on a level of my frustration when it wasn't working properly. The process of working out how to make this little black box function led both my partner and I to some levels of exasperation with the machine and, unfortunately, with each other. After returning to the UK, the last thing I wanted to do was to address the mountains of data that the AirBeam had produced. I put the thing in storage and as time has passed I have been further intimidated by it. I have not been able to bring myself to approach the AirBeam since. More than that, I have invested it with some of my own negative feelings related to the more challenging aspects of conducting fieldwork in Santa Cruz.

In the meantime, I was also trying to organise another exercise that I hoped could provide more information about the dust present in the João XXIII area of Santa Cruz. I researched ways to obtain further laboratory analyses of the dust and came

across 'Ghost Wipes' (SKC Ltd., no date). This project seemed to go more smoothly, even though, the final outcome of this exercise was still, in my view, 'unsuccessful'. Various Stop TKCSA campaigners came to a meeting where we discussed the best way to use the wipes. They suggested when and where the dust should be collected. I found a laboratory to analyse three of the wipes and paid for that service. However, it wasn't until I received the results that I realised that, unless I could find someone to explain them for me, or someone who could use them to draw conclusions, then they also weren't going to be meaningful to me or to the Stop TKCSA campaigners. These are a selection of the results (see below) and, although they are in Portuguese, my difficulties comprehending them are due to a lack of scientific literacy. To someone who is not trained to understand such data, they provoke more questions than they resolve. After searching through guidelines for standards applicable to metals in ambient air (Expert Panel on Air Quality Standards, 2008), reports relating to assessing air quality through 'citizen science' (European Environment Agency, 2019), guides to heavy metal monitoring (UK Centre for Ecology & Hydrology, no date) and Brazilian air quality standards relating to metals in particulate pollution (Santana *et al.*, 2012), I came to the conclusion that I wasn't going to be able to work out what these results meant. The difficulties of extracting meaning, or 'translating', community science findings have been dealt with by others (Murphy, 2017; Shapiro et al., 2017). At this point I sent these results to a few people that I had met and worked with in Rio de Janeiro; people that had been involved in the case of the TKCSA and who I thought might have a greater capacity to understand this sort of information or to find somebody that did. Those people acknowledged receipt but never got back to me about the data I had sent them. I felt that I had, once again, hit a dead end.

Table 2. Results from the use of the 'Ghost Wipes'.

Analytical Technology® Rua Bittencourt Sampaio, 105 V. Mariana 04126-060 São Paulo SP Tel. 11 5904 8800 Fax. 11 5904 8801 www.analyticaltechnology.com.br

Ensaios NBR ISO/IEC 17025

CRL 0212

3. Resultados de análises

PROJETO: DELIA RIZPAH HOLLOWELL

MATRIZ: RESÍDUO SÓLIDO	DATA: 02/08/2015	HORA: 21:32
LOGIN: 160571/2015-1.0	PONTO: DH001	

FÍSICO-QUÍMICO						
Parâmetro	CAS	Diluição	Unidade	Resultados	L.Q	Ref.
Teor de Sólidos	-	-	%	99,8	0,03	681

METAIS						
Parâmetro	CAS	Diluição	Unidade	Resultados	L.Q	Ref.
Alumínio Total	7429-90-5	1	mg/kg	58,4	10,0	498
Antimônio Total	7440-36-0	1	mg/kg	49,1	1,00	498
Arsênio Total	7440-38-2	1	mg/kg	< 1,50	1,50	498
Bário Total	7440-39-3	1	mg/kg	3,26	2,00	498
Berílio Total	7440-41-7	1	mg/kg	< 2,00	2,00	498
Bismuto Total	7440-69-9	1	mg/kg	< 1,50	1,50	498
Boro Total	7440-42-8	1	mg/kg	< 4,01	4,01	498
Cádmio Total	7440-43-9	1	mg/kg	< 1,00	1,00	498
Cálcio Total	14452-75-6	1	mg/kg	731,3	15,0	498
Chumbo Total	7439-92-1	1	mg/kg	< 2,00	2,00	498
Cobalto Total	7440-48-4	1	mg/kg	< 1,50	1,50	498
Cobre Total	7440-50-8	1	mg/kg	< 2,00	2,00	498
Cromo Total	7440-47-3	1	mg/kg	< 4,51	4,51	498
Estanho Total	7440-31-5	1	mg/kg	< 1,50	1,50	498
Estrôncio Total	7440-24-6	1	mg/kg	3,51	2,00	498
Enxofre Total	7704-34-9	1	mg/kg	64,1	7,01	498
Ferro Total	7439-89-6	1	mg/kg	179,3	5,01	498
Fósforo Total	7803-51-2	1	mg/kg	12,3	3,01	498
Ítrio Total	7440-65-5	1	mg/kg	< 1,50	1,50	498
Lítio Total	554-13-2	1	mg/kg	< 10,0	10,0	498
Magnésio Total	7439-95-4	1	mg/kg	107,4	3,01	498
Manganês Total	7439-96-5	1	mg/kg	17,5	3,01	498
Molibdênio Total	7439-98-7	1	mg/kg	< 2,00	2,00	498
Níquel Total	7440-02-0	1	mg/kg	< 2,00	2,00	498
Ouro Total	7440-57-5	1	mg/kg	< 3,01	3,01	498
Paládio Total	7440-05-5	1	mg/kg	< 4,01	4,01	498
Platina Total	7440-06-4	1	mg/kg	< 4,01	4,01	498
Potássio Total	7440-09-7	1	mg/kg	32,7	4,51	498
Prata Total	7440-22-4	1	mg/kg	< 1,50	1,50	498
Ródio Total	7440-16-6	1	mg/kg	< 4,51	4,51	498
Selênio Total	7782-49-2	1	mg/kg	< 1,50	1,50	498
Silício Total	7440-21-3	1	mg/kg	66,1	6,01	498
Sódio Total	7440-23-5	1	mg/kg	298,7	15,0	498
Tálio Total	7440-28-0	1	mg/kg	< 2,00	2,00	498
Telúrio Total	13494-80-9	1	mg/kg	< 3,01	3,01	498
Titânio Total	7440-32-6	1	mg/kg	2,86	2,00	498
Tungstênio Total	7440-33-7	1	mg/kg	< 1,80	1,80	498
Urânio Total	7440-61-1	1	mg/kg	< 10,0	10,0	498
Vanádio Total	7440-62-2	1	mg/kg	< 4,01	4,01	498
Zinco Total	7440-66-6	1	mg/kg	17,5	5,01	498
Zirconio Total	7440-67-7	1	mg/kg	< 3,01	3,01	498
Mercúrio Total	7439-97-6	1	mg/kg	< 0,100	0,100	406

Aprovado por:

Throughout these exercises we can see, once again, a problem of mismatching expectations. With both projects described above (using the AirBeam and the

Ghost Wipes) I had been unable to fulfil my own expectations of myself and had been left disappointed and frustrated with myself. In our use of the AirBeam my partner had then been put in a situation where he was trying to fulfil my somewhat unreasonable expectations. I was disappointed with the lack of engagement from the people to whom I sent the results of the Ghost Wipe experiment (although I understood that there was no reason why it would be reasonable to *expect* them to get involved with the results of a project that I had undertaken). I don't know what expectations, if any, the people living around me had, that I might be able to collate any extra information about what was happening with the air they were breathing. However, I estimate that the impression that I have left has included some sense of frustration among some of the campaigners, that yet another person visited and got involved in some way, generating no results and / or no feedback for the people involved in the campaign. Similarly, I am left with a definite feeling that I have not done enough, or been enough, for them, especially in the context of how well received I was, and how they supported me during my time in Santa Cruz.

As discussed above, the question of whether or not the production of evidence regarding the presence of pollution, and the social and physical harms associated with it, would lead to change, is relevant here. It is clear that evidence does not necessarily result in action or lead to improvements in toxic environments (Murphy, 2006; Liboiron, 2016; Calvillo, 2018; Liboiron, Tironi and Calvillo, 2018; Lyons, 2018). The question of whether, if I could have more successfully produced results, or if the clinic had provided reports on the causation of illnesses, expectations associated with those relationships might have been met, is counterfactual. However, it seems reasonable to suggest that while the environmental conflict surrounding the TKCSA (now Ternium) is left unresolved, these expectations will continue to emerge. What possible resolutions could look like in the environmental conflict surrounding the TKCSA varied amongst the people impacted by the steel mill. Some people felt that the factory should close, some argued that the company would also need to pay for a clean-up of the pollution it had caused, others claimed that compensation should be paid to residents, and some wanted to be helped to move away from the area themselves. Expectations arose in relationships in the

area, as part of a core need to seek those resolutions to the environmental conflict; it is in this sense that conflictual relations spread outwards from the central dispute with the TKCSA.

Conclusion: Environmental / relational conflict

Environmental conflict has been explored from a variety of vantage points since the origins of its study within the field of international relations (Lee, 2018). This literature has grown exponentially since the 1980s to include a focus on the conflictual potential of environmental degradation (Elliott, 1996), the environmental causes of armed conflict (Homer-Dixon, 1991; Libiszewski, 1992; Gleditsch, 1998; Hauge and Ellingsen, 1998), explorations of different 'types' of environmental conflict (Libiszewski, 1992; Lee, 2018), prevention of conflicts caused by, or aggravated by, environmental scarcity (Payne, 2018) and how environmental disputes can be resolved (Orr, Emerson and Keyes, 2008; Barrow, 2010). This literature has faced critique from anthropologists focusing on environmental conflict and resource related violence for some time. Anthropologists have argued that social scientific analyses of environmental conflict should include greater attention towards the ways that perceptions of natural resources are interwoven with localised political and economic structures and social understandings of the world (Timura, 2001).

Anthropological and other social science-based work on environmental conflict has also included a variety of approaches; too many to fully summarise here. The anthropology of mining and extractivism has highlighted indigenous modes of analysis and forms of opposition in environmental conflict (Nash, 1993; Kirsch, 2006, 2007, 2014; Li, 2015). Anthropological investigation of 'Corporate Social Responsibility' (CSR) has focused on the ways that CSR has entered into the framework of environmental conflict, to justify, extend and strengthen corporate power (Rajak, 2011; Gardner *et al.*, 2012). Ethnographic and social scientific studies of people living with toxicity abound. These have emphasised entanglement of molecular relations (Murphy, 2008; Agard-Jones, 2014; Shapiro, Zakariya and Roberts, 2017), emergent social forms and the creation of political

communities around shared chemical exposures (Fortun, 2001; Petryna, 2003; Shapiro and Kirksey, 2017), the uncertainty and ambiguity surrounding scientific definitions of exposure and related health effects (Petryna, 2003, 2004; Murphy, 2006; Auyero and Swistun, 2009), the importance of scale to understandings of lives lived alongside toxicity (Agard-Jones, 2013; Liboiron, 2021) and the ways in which colonialism and racism are entwined with the experience of pollution and chemical violence (Murphy, 2017; Liboiron, 2021) to name but a few.

The study of interpersonal relationships in the context of environmental conflicts has also been approached from a variety of different perspectives. Stuart Kirsch has noted that new divisions may occur in environmental movements, as people either support or oppose mining projects. For example, he cites the attempts by BHP Billington to divide plaintiffs in legal proceedings against the company, between those who chose immediate monetary compensation and those who wanted to continue legal action (Kirsch, 2007). Similarly, Zhouri et al's account of the management of the Rio Doce mining disaster in Brazil shows that intra- and inter-family conflicts abounded in the context of uncertainty around potential resolutions for those affected by the rupture of the mining dam (owned by Samarco Mining, Inc. Company, a subsidiary of Vale S.A. and BHP Billington Brasil Ltda.) (2017). For example, the institutional staggering of rights to recompense, created divisions between those who were physically displaced and those who were primarily economically impacted. These divisions, created by the institutional definitions of eligibility criteria for compensation, disrupted feelings of belonging to a cohesive community (Zhouri *et al.*, 2017).

The relational aspects of environmental conflict are intimately connected to emotion, and the emotional labour of relationships in that context is an everyday affair. Emotional geographies have increasingly delved into the ways that emotion, relationships and power are intertwined in environmental conflict (Sultana, 2015; González-Hidalgo and Zografos, 2020; González-Hidalgo, 2021). Farhana Sultana's concept of 'emotional political ecology' shows the importance of emotional and relational aspects of accessing safe water in arsenic contaminated

waterscapes of rural Bangladesh. She documents the embodied emotions associated with negotiating water usage through social relationships; showing how access to water and interpersonal relationships are intertwined (Sultana, 2015). Sultana found that individuals made concerted efforts to maintain positive relationships with owners of safe water sources. The need to make these efforts fell more heavily on the shoulders of some than others. Amidst precarious access, Sultana found that women believed they might have to keep quiet about insults or incidences of humiliation, in order to secure access to safe water. For daughters-in-law, in particular, the challenges of water access became an integral part of everyday household management (2015).

Similar work by the political ecologist González-Hidalgo charts the ambiguous role of emotions in environmental movements in Chile and Mexico (2021). She argues that while emotional environmentalism may foster political subjectivities and mobilise activists to remain active in communal activities, it can lead to what she calls 'emotional oppression' or the reproduction of emotional consequences of conflict in families, communities and social movements (González-Hidalgo, 2021). Manuel Tironi has emphasised a different type of political agency, situated in care, obligation and ethics, rather than in the production of effects or change (Liboiron, Tironi and Calvillo, 2018). Tironi points out the acts of care which can interrupt toxicity in toxic environments. This type of 'intimate activism' is to be found, he argued, in repeated cleaning of plant leaves, or caring for those suffering the health effects of toxicants (Tironi, 2018). In this sense the conflict, and modes of response to it, take place in the intricacies of human (and human / non-human) relationships that take place around industrial pollution (Tironi, 2018).

It is these more recent theoretical developments that I consider to have laid the most relevant foundations for my own argument here. What I want to highlight is that environmental conflict *is* interpersonal and professional conflict, it *is* affective and relational challenges in social relations in the area surrounding the TKCSA. This is not to say that *all* conflict in this area stems from the presence of the TKCSA, rather that conflict can expand outwards from the core conflictual relations

established between company and public, to affect other relationships around the factory. In this chapter I have tried to bear witness to the mutual, interpersonal support to be found in the *Pare TKCSA* movement, to the emotional work involved in the longevity and resilience of PACS staff and to the background of care that can be seen in the work of local clinical staff. Most Stop TKCSA campaigners, even when hardships were encountered, persevered with their relationships. The work of the Instituto PACS and campaigners has been characterised by a steady, on-going and long-term commitment to the day-to-day work of creating and maintaining relationships, over a period of more than fifteen years, at the time of writing. Similarly, the clinic staff were invested in the long-term wellbeing of the people living around the clinic, and worked on creating the positive interactions necessary to ensure that the services they offered were taken up. 'Resilience' has become a much-used term in discussions of environmental precarity and planning (Hilton and Moore, 2023; Pihkala, 2020) and there has been a focus on what can be done to enhance 'community resilience' as part of pre-emptive disaster risk reduction strategies (Barrios, 2016). I cannot, using the data collected in my fieldwork, suggest that the 'resilience' I witnessed was due to a general disposition pre-existing the environmental conflict surrounding the TKCSA, or whether it was developed as part of the conflict, encouraged by the campaign and NGO activities in the area. It does seem important to note though, that this ability to keep investing in these relationships, and their resulting longevity, was a necessary element of the campaign. At the same time, I have explored the ways in which the environmental conflict between the TKCSA and its neighbours, expands, to have a wider deleterious impact on social relations in the area.

The argument that conflict is reproduced in interpersonal and professional relationships, built up around the core 'environmental conflict', is a logical extension of understandings of the links between social relationships and emotional wellbeing. An abundance of literature has focused on the links between positive social relationships, emotional wellbeing, and health (Butler and Sbarra, 2013; Uchino and Eisenberger, 2019; Uchino and Rook, 2020). We understand that emotional processes are important to the maintenance of interpersonal

relationships, and social relations more generally (Butler and Sbarra, 2013) and empirical evidence has shown that positive relationships contribute towards emotional wellbeing (Reis, 2001; Rook, Sorkin and Zettel, 2003). Evidence is also accumulating that shows that positive emotions and supportive relationships can result in improved resilience and better health outcomes (Uchino and Eisenberger, 2019; Uchino and Rook, 2020). The impacts of deteriorations in the health, emotion, relationships interface can be understood as multi-directional, interactive, mediational or cyclical (Antonucci, Langfahl and Akiyama, 2003; Sbarra and Coan, 2018; Uchino and Eisenberger, 2019). Antonucci et al. (2003) use the example of a woman whose situation deteriorates when she becomes the main caregiver for an ill parent, despite having siblings. Relationships with siblings become strained, she feels stressed, her mental health deteriorates, she is unable to enjoy social interactions and withdraws further. This leaves her with a smaller support network and this, in turn, further impacts her mental health. Antonucci et al. summarise this by stating that, "personal / situational characteristics, social relations and well-being are in a continuing interactive sequence of associations that are fundamentally dynamic in nature" (2003, p.38).

Elements of this type of dynamic are observable in the João XXIII region of Santa Cruz. We have seen how conflict can spread from conflictual relations between company and people living around an environmentally damaging mega-project, towards conflict that permeates families, friendships, an environmental campaign, and State-run health-care institutions. The environmental conflict surrounding the TKCSA was not discrete and bounded, or restricted to conflictual relations between the company and its neighbours. Issues arose as direct or indirect results of the presence of the steel factory in the area and had knock-on effects on the relationships that people living and working there were able to generate and maintain.

In this chapter I have highlighted the importance of peoples' expectations in expanding environmental conflict in Santa Cruz. Dissatisfaction in relationships appeared to occur when expectations were mismatched between the people

involved. This took the form of expectations about public engagement in the politics surrounding the presence of the TKCSA, the need for the acknowledgement of effort in the campaign, and the desire for the generation of 'proof' of the presence of pollution and its resultant physical and social suffering. Pin-pointing mismatching expectations is key to understanding the ways that conflict unfolds. Lucas's family were increasingly annoyed because of the amount of time that Lucas dedicated to the Stop TKCSA campaign, rather than to family responsibilities. Lucas felt under-recognised by the NGO involved in supporting the campaign. Marcos felt disappointed with local participation in the struggle against the TKCSA. Local residents felt that doctors were not fulfilling their duty and clinic staff felt that local residents were not meeting their 'responsibilities'. I felt frustrated with my partner because he couldn't make the air quality monitor function reliably, and, as a result I know that he felt annoyed. I suspect that, since I left Santa Cruz, some members of the Stop TKCSA campaign have felt disappointed that yet another 'outsider' has failed to make any difference to their situation. These differential expectations are consequences of the presence of the TKCSA, and integral elements of the conflict surrounding the steel mill.

The next chapter, the conclusion to this thesis, will pick up on many of the themes laid out here and in the last few chapters, in order to delve further into the correlations between pollution, environmental conflict and emotions.

Chapter 12. Conclusion

Introduction

This thesis has described life near the ThyssenKrupp Companhia Siderúrgica do Atlântico. Fifteen months of ethnographic fieldwork in the João XXIII region of Santa Cruz has allowed me to capture some aspects of what it can be like to live around one of the largest steel factories in Latin America, to live near a subsidiary of a multi-national corporation, to engage in, or be impacted by, elements of environmental conflict and to experience industrial pollution. I have focused on the complex ways that emotions are intertwined with the material realities of living with industrial pollution, large-scale industry and a powerful corporation. As explorations of the emotional impacts of environmental conflict, disasters and climate change have increased, emotions have, at times, been represented as mere *reactions to* environmental issues. Instead, I have attempted to understand the varied ways that affect can feed back into actions, relationships, protest, health and healthcare in Santa Cruz as well as the trajectory of the environmental conflict as a whole. Inspired by feminist approaches to emotion. I consider feelings in their everyday contexts, as relational and collective, and as actively shaping life as it unfolded around the TKCSA.

The chapters of this thesis have explored subject matter as distinct as trafficking and the militia, sex and relationships, corporate language and protest, and religious beliefs and friendship. Each chapter has developed arguments focused on relatively disparate topics. In Section 1 of this thesis, I found coherence in seemingly contradictory memories of Santa Cruz, as subject to a relatively recent history of trafficking-based violence, and as a kind of bucolic paradise, by recognising that narrative histories are both material truth and instrumentalised perception (Chapter 3). In Chapter 4 I argued that police, militia, and drug traffickers in the area were understood as (almost) one and the same. Chapter 5 visited the topic of sexual and intimate relationships to argue that breaking the established norm of monogamy led to varied emotional consequences. In Chapter 6 I concluded this section of the thesis by making the claim that mistrust is

generated through experiences and expectations of motivations and behaviour, and by documenting the relevance of this for relationships between the TKCSA and the people living beside it. In Section 2, I wrote about the varied impacts of the TKCSA on people living around it (Chapter 7). Chapter 8 focuses on the corporate argument that the dust emitted from the factory was just graphite. In this chapter I have shown that corporate discourse can be violent, in and of itself. Chapter 9 argues that blame featured heavily in understandings of illness in the area and examines the TKCSA's corporate social responsibility programme within that paradigm. Chapter 10 focuses on two types of emotion work that occurred around the TKCSA and argues that everyday emotional responsiveness to environmental conflict could become embodied resistance through the performance of victimhood. In this chapter I claimed that 'victimhood' could be a form of political agency given the presence of infrastructural support for protest. Chapter 11 examined the emotional-relational impacts of the ongoing conflict with the TKCSA (now Ternium) and argued that 'environmental conflict' in Santa Cruz was not discrete and bounded, but rather spread to families, friendships and institutions in the area.

These findings are important in efforts to understand the specifics of the situation in the residential area of João XXIII, neighbouring the TKCSA. A large number of academic explorations of the impacts of the TKCSA have been undertaken (Zborowski and Loureiro, 2008; Porto et al., 2011; dos Santos, 2012; De Souza, 2013; Dias et al., 2014; Viégas and Mendes, 2017; Rocha, 2018; Tavares, 2019; de Souza, 2021). There have also been a number of NGO reports about the TKCSA (now Ternium) and its impacts on people (Instituto PACS, 2015; Instituto PACS & Justiça Global, 2017). This work provides a detailed picture of issues related to how the TKCSA came to be developed and funded, the licensing process of the TKCSA, the company's 'corporate social responsibility' programme, the TKCSA's polluting emissions, and the impacts on health in the area. The two studies completed by Fiocruz (Porto et al., 2011; Dias et al., 2014), include reports of clinical evaluation of residents of Santa Cruz who had been impacted by atmospheric pollution. These articles and theses have highlighted many of the

injustices, to which local people have tried to bring attention. The ethnographic methodologies used in the research conducted for my thesis, and detailed in Chapter 2, have lent a very different lens to my work. My thesis is based on the necessarily reflexive processes involved in an extensive period of ethnographic fieldwork, while living two streets away from the factory. The practices of taking part, questioning, listening, developing and working on relationships as well as observing, and making records, while living in the João XXIII area of Santa Cruz, have facilitated a view of the ways the issues reported in the academic studies discussed above, were intertwined with everyday life in Santa Cruz. It is this perspective that my work adds, to the, already meticulously studied, case of the TKCSA in Santa Cruz.

This research also contributes towards several subfields of work on toxic exposure experience and environmental conflict in general. Anthropological investigations of 'corporate social responsibility' (CSR), for example, have focused on the use of language to recast 'harm industries' as innocuous, (Benson and Kirsch, 2010b), corporate evasion of accountability (Rajak, 2011; Kirsch, 2014; Coumans, 2017) and stifling of debate (Li, 2015; Babidge, 2018). The structures leading to the suppression of resistance in Brazil have also been well documented (Zhouri, 2015; Rigotto, 2017; Santos, Ferreira and Penna, 2017). In the case of the TKCSA, while similar corporate strategies and figurative devices were employed, I build on these observations by locating corporate communicative violence in the intricacies of corporate language itself. A detailed deconstruction of corporate communications has allowed us to pinpoint violent language and to better understand the ways public relations efforts are received. I have also contributed to work on trust in environmental conflict. Scholars have long underlined the centrality of trust in environmental engagement and shown how local perceptions of corruption can result in common distrust of companies and government institutions (Muradian, Martinez-Alier and Correa, 2003; Graeter, 2017). I have continued with this line of work by interrogating the particular ways in which mistrust in a large corporation can interact with, and reflect, more general societal patterns of mistrust. My contribution has been to highlight that mistrust of the TKCSA was based on

previous experiences and expectations of motivations and behaviour; taking into account the impacts of activities of drug traffickers and the militia, the actions of a large corporation and the public authorities that supported the TKCSA, as well as a concurrent nationwide corruption scandal.

However, these topics, have not, in themselves, formed the mainstay of my interest in the people living next to the steel factory, nor do they constitute the core elements of the arguments of this thesis. Throughout the preceding chapters I have highlighted the emotional elements of these aspects of life neighbouring the TKCSA, in efforts to investigate the place of emotion in the context of environmental conflict and industrial pollution. This has necessitated a broad view of the ways that emotion and environmental conflict manifest themselves in social life around a polluting steel mill. Emotion has emerged in the interstices of each of the topics explored in each chapter, reflecting the ways in which emotions often arise in everyday life (White, 1994; Gasparini, 2004). It is the conclusions that I have drawn regarding the experience of emotion, as it is related to the pollution and conflict surrounding the TKCSA, that I go on to discuss here.

Breadth of topical focus is joined, in this dissertation, by a commitment to a broadening of concepts. Efforts to push at the boundaries of established definitions have developed from a desire to take interlocutors' understandings seriously. I have found that in order to understand and accurately reflect what my friends and neighbours were expressing, I have had to settle on broad and inclusive definitions of concepts such as politics, protest, violence, conflict and emotion. Such expansion has been undertaken by others before me. Following Tironi, I have embraced an expanded concept of politics (2018). I have sought this expansion in order to take into account the efforts informants made to encapsulate emotion in the pursuit of everyday life (see Chapter 10). Following various authors, I have sought a broadened understanding of violence (Farmer, 2004; Nixon, 2011; Nelson, 2021), through which I can locate the violence of public relations language and corporate social responsibility (see Chapter 8). I have also pursued a broad definition of environmental conflict, following social theorists in stretching the

concept; see, for example, Zhouri (2017), González-Hidalgo (2020) and Kirsch (2007). In my work, this latter conceptual expansion has formed part of an effort to include the affective and relational aspects of environmental conflict that emanated from core conflictual relations established between corporation and the public around it (see Chapter 11).

A key contribution of this thesis has been to illustrate the importance of a commitment, in the context of environmental conflict, to an inclusive definition of emotion. This has meant maintaining a broad perspective on the causation of emotional responses, using extensive but everyday language to capture what emotions are, understanding the transformational impacts of environmental conflict-related emotive experience on relationships, and tracing the implications of those emotional transformations. I argue that it is only through such a wide lens and by viewing emotion as it emerges through disparate aspects of life, that the diverse dynamics of affective experience in Santa Cruz can be gleaned. In what follows I focus on my findings relating to the emotional experiences associated with living in the João XXIII area of Santa Cruz, near to polluting industry, and in the midst of environmental conflict.

Emotion, environmental conflict and pollution

Several authors have highlighted the need to better understand how environmental conflict, and living with toxic contamination, feels (Little, 2012; Sultana, 2015a; González-Hidalgo, 2021). For some time, the focus on the emotional elements of community contamination, toxic exposure experiences and environmental conflict has been relatively patchy. However, environmental-emotional connections have been established in environmental writing, throughout its development. Rachel Carson's work placed feelings at the centre of her environmental narrative (Lockwood, 2012) and called for a politics that could, not only prevent the physical demise of life but also save life as a site of wonder, pleasure, and love (Maxwell, 2017). Some of the very early environmental sociology stemming from the environmental justice movement documented psychological impacts of toxic exposure. Robert Bullard's now seminal work, "Dumping in Dixie" notes some

psychological impacts of the siting of municipal waste dumps near black communities in the southern states of the USA (2000; Brulle and Pellow, 2006). Adeline Levine's work on the Love Canal case documented the psychological factors that shaped residents' reactions to the discovery that their neighbourhood had been the site of dumping by the Hooker Chemical Company (1982; Stone and Levine, 1985). Brown and Mikkelsen showed the psychological costs at a familial level, of childhood sickness, due to corporate contamination of the public water supply in Woburn, Massachusetts. This latter work illustrated the links between psychological states, including depression and anxiety, and, for example, the necessary repetition of personal stories during the litigation process (Brown and Mikkelsen, 1997). However, much of the related literature that followed, examining sites of toxic contamination, contested illnesses and 'sacrifice zones', (Brown, 1995, 2007; Kroll-Smith, Brown and Gunter, 2000; Lerner, 2010; Endres, 2012), omits mention of the emotional impacts of toxic exposure. Latin American literature on environmental justice has also flourished (Gouveia and Habermann, 2008; Milanez and Porto, 2008; Ascelrad, Mello and Bezerra, 2009) and social scientists in Brazil have explored the situation in Santa Cruz, and the issue of the TKCSA / Ternium steel mill, through the lens of environmental justice (Pires and Guimarães, 2016; Rocha, 2018; Tavares, 2019; de Souza, 2021). However, these analyses of the case of the TKCSA do not explore, in detail, the emotional impacts of the steel mill, as felt in the João XXIII area of Santa Cruz.

The field of disaster studies has dealt with the psychological impacts of environmental degradation in some detail (Norgaard and Reed, 2017). Michael Edelstein's work on contaminated communities, for example, investigated the psychosocial impacts of toxic exposure (Edelstein, 2004). He developed postulates that could be used for comparison of different contaminated sites. These emphasised the importance of context as well as the ways that contamination may affect lifestyle, cognitive processes, and interpretative frameworks. Edelstein highlighted the inherent stress that can affect individuals and social relationships in contaminated communities, and the stigma and anticipatory fear associated with becoming 'contaminated' (2004). In Latin America, considerable research has

documented the political productivity of emotions in the aftermath of disaster. Some Latin American 'disaster studies' have shed light on emotional processes and their links to the environment in which they occur. Siqueira and Víctora (2017) identified the micropolitical work of emotion in protest following the Kiss Nightclub fire in Santa Maria, Brazil, documenting the ways that changing embodied emotional responses shifted meaning, from a focus on sharing the pain of loss, to a demand for indignation (Siqueira and Víctora, 2017). Recent studies in the wake of the Samarco Dam disaster have traced affective responses to corporate management and state interventions in the wake of industrial disaster in Brazil. Zhouri et al. (2017), for example, analysed the production of affect in the aftermath of the Rio Doce tragedy, not only through the material damages produced, but also as a consequence of the structures and language of institutional intervention (Zhouri *et al.*, 2017). These works, like mine, have identified emotional responses to institutional actions, and emotional impetus behind protest, through a broad understanding of varied and shifting causations of emotion.

This subject has been considered from several angles in recent years as literature on this subject has burgeoned. A common thread of much ethnography of communities experiencing toxic exposure is a particular commitment to illustrating how those exposures, and their effects, are intertwined with social, political and economic factors in what is often referred to as 'biosocial entanglement'. In her work on the ways in which different groups understood and engaged with the disaster at Union Carbide's pesticide plant in Bhopal, Fortun traced legal, bureaucratic and advocacy responses to it, within India and the US (2001a). Her research illustrated the ways in which legal processes, medical interventions and corporate actions often contributed to the discrediting of suffering (Fortun, 2001). Investigations of toxic 'exposure experience' have emphasised the ways that 'environmental suffering' occurs as a result of an intermingling of the toxic materials themselves, community understandings (Adams *et al.*, 2011) and the views, actions and appraisals of government, lawyers, doctors and corporations (Auyero and Swistun, 2009). Singer argued that 'toxic frustration' existed amongst residents of Donaldsonville who were exposed to manufacturing plants and agribusinesses

around them (2011). This emerged through the conjunction of a level of certainty about their exposure experience and the sense that there was not much that could be done about it (Singer, 2011). There is, therefore, significant consensus that emotional wellbeing can be, and is, impacted by disasters and experiences of contamination and pollution. There is, too, a clearly established precedent for discussing the ways that those emotional impacts are intertwined with community understandings, experiences of contact with institutions, health impacts, and possibilities for change, amongst other things. My work speaks to these issues; and adds a varied, broad and inclusive discussion of emotion as it is experienced, and as it impacts the ways in which environmental conflict unfolds.

During this thesis I have found myself referring to scholars producing work as part of geography's 'emotional turn'. The concept of 'emotional political ecology', as theorised by Farhana Sultana, has documented how emotions matter in resource struggles (2015). Sultana explores the multifaceted emotional suffering of people seeking safe water in an area of arsenic contamination in rural Bangladesh, and looks at how feelings can mediate access, use and control of water (Sultana, 2015). Her work emphasises the everyday experiences of securing safe water, the relational aspects of water access and the emotional labour of maintaining relationships with those who control water sources (Sultana, 2015). In other geographical work on emotion, González-Hidalgo and Zografos invite us to consider the importance of emotions in political subjectivation when studying environmental conflict (González-Hidalgo and Zografos, 2017). The focus in this work has been what can emotion do. For these authors, everyday affective labour can inspire political engagement in collective work as land defenders (González-Hidalgo, 2021), however the emotional impacts of such a struggle, in the context of capitalism, expanding extractivism and direct violence of the State and corporations, can also lead to feelings of powerlessness, anxiety and depression which can hinder collective political work (González-Hidalgo, 2021). While this geographical work unsurprisingly prioritises the relationship between emotion, space and place, it is the acknowledgment of the complexities and subtleties of emotion, as played out through environmental conflict, that can be most

successfully incorporated into anthropological studies. This literature offers a view of the ambivalence of emotional experience, the convergence of multitudinous emotions in relation to any one particular occurrence, potentially multiple and co-occurring factors, and the impacts on relationships and political movements.

I hope to have further elaborated on these insights by folding elements of this approach into a wholly anthropological project. Someone who has combined a sensitivity to emotional intricacies, with anthropological methodologies and sensibilities, in his ethnographic investigation of environmental conflict, is Manuel Tironi. In his work in Puchuncaví, Chile, Tironi has suggested an expanded understanding of political action to include affective acts and sustained caring activities. These, he argues, can create material and affective endurance in the face of toxic suffering and make industrial harm knowable (2017, 2018). He notes the 'slow activism' (Liboiron, Tironi and Calvillo, 2018, p. 341) or 'intimate activism' (Tironi, 2018, p. 440) that allows for everyday survival of residents of Puchuncaví. Tironi's focus on the emotional elements of living in toxicity, is an expansion of our understanding of the possible modes of acting, and potential forms of 'response-ability', in a world that is permanently and unevenly toxic (Liboiron, Tironi and Calvillo, 2018, p. 332). Víctora and Coelho have similarly identified the micropolitical force of emotions as an important emerging focus of the anthropology of emotions (2019), and this is clearly the case for anthropological investigations of toxic exposure experiences. In tracing the role of emotion in this toxic worlding, our work must seek out these multifaceted experiences, slow down to pay attention to the details of less sublime politics, and avoid prefigurative understandings so as to access the subtleties of material and immaterial connections (Liboiron, Tironi and Calvillo, 2018; Nading, 2020).

A broad understanding of emotion

I have not, in this thesis, differentiated between 'affect' and 'emotion'. 'Affects' have been presented as non-conscious or pre-cognitive, un-articulated, dynamic sensory experiences characterised by intensity (Gould, 2010; Martin, 2013). In the common formulation of the gap between 'affect' and 'emotion' the latter has been

seen as more fixed and subject-centered (Schmitz and Ahmed, 2014; White, 2017) and inherently linked to cognition (Schmitz and Ahmed, 2014), language (Navaro, 2017), and narrative (Beatty, 2014). I have been more convinced by definitions of emotion which embrace much of the dynamism, relationality and intensity which has been assigned to affect, and reject the idea of clear and distinct boundaries between the two (Schmitz and Ahmed, 2014). I have used the words 'feeling', 'affect' and 'emotion' to reflect this, with an emphasis on 'feelings' and 'emotion', to remain more loyal to the language I heard In Santa Cruz.

In my efforts to understand the environmental conflict in the João XXIII area of Santa Cruz, I have recognised feminist and queer theorists' articulations of emotion. This renewed interest in the everyday experience of emotion (Staiger, Cvetkovich and Reynolds, 2010) has shown emotion to be relational and collective (Ahmed, 2004) and has treated emotion as a kind of bodily thinking, including judgements about things as well as visceral corporeal responsiveness (Leavitt, 1996; Ahmed, 2004; Schmitz and Ahmed, 2014). Sara Ahmed's work has particularly informed my own. She has emphasised what emotions can 'do' in the world, arguing that "it is through the intensification of feeling that bodies and worlds materialize and take shape" (Ahmed, 2004, p. 29). I have seen emotions taking shape as part of specific situations, and in so doing, shaping life around them; they cannot be picked apart from the world they emerge within. It is necessary to identify emotions in the messiness of the experiential, rather than as autonomous reactions standing apart from their contexts (Ahmed, 2010).

Emotions can be tricky; the ways they develop, are expressed, and come to be identified and interpreted can be unexpected. Feelings aren't always straightforward or 'out in the open', they may be found in attitudes, they may be implied by actions undertaken or they may be conveyed in unanticipated ways. People's emotions may appear muted, and this may or may not belie an intensity of feeling (Berlant, 2015). Some feelings may differ from expectations about what one should feel, or what one thinks one would feel, in any given situation (Gammerl, Hutta and Scheer, 2017) and their meaning and effects in the world may be

markedly ambivalent (Ngai, 2004). Becoming conscious of these possibilities emphasises the ways in which our apprehension of emotion becomes crucial (Berlant, 2015). Whether or not I have achieved such things, and whether or not it is possible to achieve them all of the time, I hope to have, at the very least, been mindful of the need to approach emotions, and my own interpretation of them, with care, and I have sought an understanding of my own situatedness and a sense of humility in my encounters with other peoples' feelings.

I did not seek emotions as the subject of my thesis. In fact, the coalescing of my interests around emotion occurred relatively late in fieldwork and solidified during the process of writing. During fieldwork, emotion emerged while I was concentrating on other things. Hence why each chapter of my thesis has made arguments that may initially appear to be unrelated to emotion. This wide lens has allowed me to identify emotion as part of all aspects of life in Santa Cruz. Emotion became evident, not as responses to direct questions about feelings, but rather, on the side-lines of other issues. For this reason, there is relatively little in this thesis, along the lines of 'X person felt Y about pollution or environmental degradation'. Instead, I have viewed emotions as fundamentally social, emerging from social contexts, rather than as reflections of purely internal states (Koury, 2016). I have proposed to consider emotions as fundamentally intertwined with, and emerging as part of, the many other issues that developed while I was in Santa Cruz.

As well as the fact that emotions need to be 'read' within the fabric of normal life and apprehended with care and an openness to flexibility of interpretation, we must trace how emotions feed back into the world; how they are productive. There are many proponents of this idea. Notably, Lutz and Abu-Lughod asserted that emotional discourse is a social practice that can "establish, assert, challenge, or reinforce power or status differences" (1990). I have discussed some of the Latin American research that has documented the potential political productivity of emotions in the aftermath of disaster and in contexts of chemical industrial toxicity (Siqueira and Víctora, 2017; Tironi, 2017, 2018; Zhouri *et al.*, 2017). Inheriting this focus, I have attempted to document, how emotions in environmental conflict can

act on the formation of the self and on the dynamics of relationships and groups. I have written about the ways that emotions have bolstered resistance to the TKCSA and softened the sting of political disempowerment. I have shown how emotions can shape understandings of the past, divert attention away from, or attract attention towards, the material concerns of the present and create collective dispositions in expectation of potential futures. If we view emotion as a potentially productive social force, then an understanding of the effects of emotion in environmental conflict is crucial. It is this perspective on emotion in environmental conflict that I believe needs greater attention. In this sense I hope to have captured some of the messiness of the experience of environmental conflict as well as the part that emotions have played in the creation of the world I have documented.

This approach has allowed for a broad and inclusive understanding of what emotion is. The 'classic' emotions that one might expect to arise in environmental conflict, such as anger, sadness, grief, and frustration do not adequately reflect the affective registers that materialised in response to the harms generated by the TKCSA. As well as these, I have noted emotions that were embedded in generalised dispositions, that could be found wrapped up in descriptions of completely distinct feelings, that were illustrated by actions or that could be seen in the slightest of bodily inflections. In this vein, I documented the pride taken in continued campaigning, even when threatened, that was wrapped up in an expression of gratitude that God had caused the death of *milicianos* (see Chapter 9). While the campaigner, and friend of mine, Davi seemed to be informing me about the power of God to bring victory, and his hope in that potential future, he also expressed the moral indignation and reproach he felt for the militia and their involvement in Stop TKCSA's dispute with the steel mill, he conveyed his pride that his brother was able to stand up to the militia, his conviction to do what was right and his sense of belonging amongst those who opposed the factory. These feelings were a part of Davi's (and his brother's) capacity to continue in the face of adversity and have fed into the relationships that were generated through the campaign. Similar feelings of pride, care and self-actualisation led Luiz to try to get others involved (see Chapter 10) and were part of the way that Lucas expended time and

effort showing me (and others) what was going on around the factory; efforts that generated our friendship (see Chapter 11).

A commitment to a wide lens in relation to emotion, and its part in environmental conflict, arose as I increasingly witnessed the impact of emotions on the trajectory of the dispute with the TKCSA. I have written about the common aversion towards 'getting involved' that grew from experiences with drug traffickers (see Chapter 6). This vigilance in everyday social interactions was not only based on a series of judgements about what and who not to get involved with; it was also founded in feelings such as fear and worry, and the perceived moral correctness associated with not getting involved, potentially including an element of satisfaction that 'I survived because I did the right thing in avoiding certain people and situations'. I have discussed how this may have formed part of an apparent hesitancy to 'get involved' in campaigning against the TKCSA, amongst those who preferred to stay out of the issue (see Chapter 6).

Similarly, I have documented the blame that circulated around understandings of the harms associated with the pollution from the steel mill (see Chapter 9). When people who didn't live in Santa Cruz blamed residents for their ill-health, that blame often belied a sense of disgust and contempt that residents were somehow unclean, irresponsible, and unable to look after themselves properly. These sentiments were also evident in corporate social responsibility (CSR) campaigns to 'rescue values' that were perceived to have been lost, they were behind the design of CSR events that were aimed at showing residents how to look after themselves, other people and the local environment (see Chapter 9). This is emotion, turning up in attitudes towards people which, in turn, appear to be driving elements of corporate policy. In this way, I have followed emotions to view their multiple impacts on the environmental conflict as it unfolded.

We have seen, in Chapter 11, how emotions linked to the involvement in the Stop TKCSA group, such as the collective frustration, bitterness and angst associated with the lack of tangible 'wins' in the conflict with the TKCSA (and evident in Stop

TKCSA meetings), led Lucas to a pervading sense of a need to do something, and to keep going. Added to this was his sense of purpose, self-actualisation and the emotional rooting of his identity in campaign organising which also spurred him on to dedicate a lot of his time to the Stop TKCSA campaign. This caused issues in Lucas' more intimate relationships, as his wife and daughter became frustrated that Lucas was spending 'all his time' organising *'Pare TKCSA'* events. This frustration was alluded to in relatively practical statements from Lucas' family, that appeared to hint at requests that I not add to the demands on Lucas's time, and that I go on to discuss this issue with PACS (see Chapter 11). Lucas' family's annoyance at PACS, at Lucas and, perhaps at me, was communicated subtly and carefully; it illustrated elements of ease, as well as discomfort, in speaking more plainly about the subject with me, and it also intimated ongoing familial disagreements about priorities, and stress about making ends meet.

These are all emotions, though they were not always necessarily presented straightforwardly, and cannot be easily categorised or generalised as 'sadness' or 'anger', 'grief' or 'frustration'. These emotions became evident through day-to-day activities, through discussions that weren't directly about emotion, and through subtle ways of being and approaching issues as they arose (Stewart, 2007). They were integral to, and impossible to disentangle from, the messy, unruly, experience of environmental conflict and industrial pollution. Feelings were active elements of life as it unfolded around the TKCSA. Emotions such as indignation, outrage, self-actualisation, and obstinacy fuelled the political campaign against the factory, while vigilance, moral fatigue, intrafamilial stress, and resignation could limit the spread and intensity of political opposition to the steel mill. Emotions generated relationships and caused disjuncture in them, they enabled corporate actions and they contributed towards people's sense of self. It is this commitment to apprehending the sheer breadth of experience that makes up emotion, as well as its intricate detail, that I posit is necessary to fully capture what it is to live in a place, and with people affected by the presence of a large factory, a powerful multinational corporation and extensive pollution.

Emotions breaching conceptual boundaries

A theme to emerge from the analysis presented in this thesis, has been the boundary-defying spread of emotion in environmental conflict. It is by observing where emotions 'go', who they affect, their transformations, and the changes that are wrought by them, that we can, more effectively and accurately, understand the emotional impacts of exposure to pollution and environmental conflict. Recent literature unpicking the entanglements of the Anthropocene[47], has called for a dismantling of many of the boundaries and oppositions that have long characterised Euroamerican cultural schemas of emotion (Lutz, 1986). Anthropocene focused literature has called into question oppositions, boundaries, and categories such as those between nature and society, subject and object (Latour, 2014), foreground and background (Peacock, 2012; Boscacci, 2019), and between human and non-human (Tsing, Mathews and Bubandt, 2019; Caracciolo, 2021). The looming bleakness of Anthropocene changes (Rose Bird, 2014) has necessitated a focus on emotion, and continuing attention towards emotions seems inevitable as the scale of Anthropocene challenges becomes clearer.

However, despite calls to forego traditionally bounded categories, and to view emotion as an integrated part of collective life, some studies of Anthropocene emotion have tended to list feelings as responses to experienced or anticipated environmental loss (Cunsolo and Ellis, 2018; Albrecht, 2020; Clark, 2020; Clissold *et al.*, 2022). These studies have highlighted the importance of emotions in the Anthropocene, but the effect can be to simplify emotions, as mere 'reactions to' environmental changes, rather than looking at the complex ways emotions can feed back into actions, relationships, health and well-being. Alternatively, investigations of Anthropocene emotions project into the future to elucidate potential strategies of affect, that may facilitate new ways of inhabiting the Anthropocene. Collective emotional changes, it is argued, may be necessary in

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[47] The Anthropocene describes the geologic epoch in which human transformations impact all life on Earth in ways that are unprecedented in their reach, and potentially irreversible (Crutzen, 2006; Zalasiewicz, 2017). Research into what Tsing has coined the 'patchy Anthropocene' has gone on to draw attention to the unequal relations among humans, as they transform more-than-human landscapes with unintended consequences (Gan, 2017; Tsing, Mathews and Bubandt, 2019).

order to learn to live in a changing world. These changes might include, acknowledging painful emotions (Head, 2016) or extending love to the more-than-human world (Renshaw, 2021). Other work has focused on ways to achieve emotional healing amid environmental crises (see for example, Westoby, Clissold and McNamara, 2022). While the endeavour to illustrate these elements of Anthropocene emotion is important, much of this work falls short of the boundary-breaching complexity evident in other areas of focus within Anthropocene literature.

In my examination of life surrounding one of the largest steel mills in Latin America I have documented emotion as it journeys between individuals, impacts attitudes and behaviours, affects relationships, has a bearing on the work of institutions, and moves between public and private spheres. To this end I have drawn from work that has challenged the idea that affect is to be found in private (Cvetkovich, 2007; Staiger, Cvetkovich and Reynolds, 2010) as well as from work that has emphasised the inherently social character of emotion as co-constituted, intersubjective and collective (Ahmed, 2004; Ngai, 2004; Blackman and Venn, 2010). The data presented in this thesis has illustrated some of the ways that emotions can run through the environmental conflict surrounding the TKCSA; eluding containment in any one individual.

We have seen that feelings abounded in, and circulated around, institutions, such as the local state-run health clinic that I discussed in Chapter 11. Many residents of the Planning Area 5.3 (patients and potential patients of the clinic) felt distrust, suspicion, annoyance, and blame, in relation to the clinic because staff members did not provide reports documenting the causation of illness. This had a direct impact, according to interviewees, on their interactions with the clinic. Meanwhile, some clinical workers related to me that they felt under scrutiny, that they feared potential problems developing with patients and had experienced relational break-down with patients because they would not, or could not, provide documents requested. A few members of staff illustrated feelings of disdain towards patients who they felt needed cajoling to take responsibility. Amongst some clinical staff I sensed a long-term and embedded feeling of tiredness and disappointment with

the ways that local residents interacted with the clinic. I have documented the commitment and hard work of clinical professionals in the state-run clinic I worked in, and I have noted that many reported positive experiences of relationships between clinical professionals and patients. However, these, more negative, sets of feelings around the institution interacted with each other, and, to some extent, appeared to act as a hindrance to the development and maintenance of positive relations between some practitioners and some members of the public they served. I felt that the feelings discussed here had a direct impact on the culture of the institution, in that they played into the needs of clinical staff to document their work, to avoid conflict, to record their efforts on behalf of patients and to ensure that, should a problem arise, they could illustrate that they had followed procedures.

I have illustrated how emotions shared in groups or institutions, can spread to, or have 'knock-on' impacts on, more intimate relationships, and vice-versa. The gravity of the impacts of the conflict with the TKCSA, and the intensity of feeling about those impacts, were communicated to me through the collective outpouring of emotion at Stop TKCSA meetings and events (see Chapter 10). I felt that the emotion expressed in Stop TKCSA meetings directly called for others (including myself) to take on some responsibility for the situation, to feel its weight and to be moved to act in the name of people suffering the impacts of pollution and corporate violence. These feelings came out in my own relationship with my partner, as I struggled to collect data that I hoped would be of use to Stop TKCSA members. As I became bogged down in the technicalities of collecting air quality data, the heavy sense of responsibility was transformed into stress and frustration and led to arguments with my partner. My sense of inadequacy in a conflict that was, I felt, more complicated and just 'bigger' than I could properly grasp, my discomfort at not being able to contribute anything particularly useful or substantial to the Stop TKCSA campaign and my own feelings of self-imposed pressure and impatience at the amount of things I felt I needed to do, and to record, all led to my venting some of that stress on to my partner (see Chapter 11). In this example I can attest to the movement of emotion from collective expression to my own feelings. We can

see, too, that as these emotions morphed and moved between people, they had very real impacts.

Similarly, this thesis has documented a different trajectory of emotion; showing how personal experiences of emotion could be mobilised as more public displays of affect in the course of the Stop TKCSA campaign. In Chapter 10 we saw the relatively personal performative emotion that allowed for coping with environmental conflict in everyday life in Santa Cruz. I argued that this could then emerge as what I called 'emotive performance', or the relatively theatrical, hyperbolic, and more public, performance of victimhood, when audiences of lawyers, cameras and politicians made such emotion viable and potentially effective. This commitment to following emotion where it 'goes', identifying the ways it shifts and changes, and to uncovering what it 'does', is a contribution of this thesis to the work on emotions and environment in the context of toxic exposure experience and environmental conflict.

An inclusive understanding of the causations of emotion

My depiction of emotion in the João XXIII region of Santa Cruz would have been hampered, had I been looking for emotion caused by the pollution emitted by the factory. Emotion in contaminated environments does not solely arise as a result of the contamination, in and of itself. As I have noted already, social scientists investigating the emotional impacts of toxic exposure experiences, contamination or experiences of pollution, have emphasised the ways that these are inextricably intertwined with social and medical understandings, administrative processes and institutional approaches. Authors before me have investigated some of the many possible causes of emotional responses. Peter C. Little has investigated the emotional ecology of environmental mitigation technologies, in Endicott, New York. He found that residents of Endicott felt uncertain that vapor mitigation systems reduced indoor air concentrations of pollutants and concluded that environmental contamination response is emotionally and socially constituted by residents (Little, 2012, p. 445). In Endicott, emotion was caused by apparent attempts to reduce people's exposure to pollution, not just by the pollution itself. Similarly, recent

studies have traced affective responses to corporate management and state interventions in the wake of industrial disaster in Brazil. Zhouri et al. (2017), for example, analysed the production of affect in the aftermath of the 2015 Rio Doce dam collapse, not only through the material damages it produced, but also as part of the further suffering caused by the institutional processes through which rehabilitation efforts were managed (Zhouri *et al.*, 2017).

I have kept an open mind about the causation of emotional responses. While anthropologists have studied CSR, and public relations language, extensively over the last few decades (Benson and Kirsch, 2010b; Rajak, 2010, 2011; Dolan and Rajak, 2011; Welker, Partridge and Hardin, 2011; Gardner *et al.*, 2012; Welker, 2016), there has, to the best of my knowledge, been relatively little explicit mention of the affective reception that CSR can garner. In Chapter 8 I examine this, in detail, to show that residents suffered a triple exposure; not only to pollution, but also to corporate denials as well as to repeated claims, on the part of the TKCSA, that the company was an asset to the community. I discuss, in Chapter 8, the awareness amongst activists that emissions weren't 'just graphite'; campaigners were conscious of the aspects of living with pollution that were left out in the company's PR strategy, and they knew that corporate communications evaded the things that affected them. Campaigners clearly also *felt* the TKCSA's corporate communications as a kind of violence and expressed these feelings somatically.

Keeping an open mind with regard to the causation of emotions has had an important effect on my work. Rather than trying to link emotional responses directly to experiences of pollution, I have been able to take seriously the views of informants (Wagner, 1981). Following the logics that are provided to us by informants can mean that instead of simply recounting what is related to us, we can more easily join them in *feeling* the meanings laid bare in their understandings. Understanding the underlying meanings of corporate communications can help us to *feel with* the people impacted by them. As my stay in Santa Cruz was to be short-term, my exposure to the combined impacts of pollution and other forms of corporate violence, such as those found in CSR programmes, was limited.

However, as I investigated the details of what the TKCSA was saying, and not saying, and how that was enmeshed with the struggles of living in a contaminated landscape, I felt compelled and able to, more profoundly, feel with campaigners; to share in their feelings of indignation, anger, and frustration. This openness to different elements of causation behind feelings has two advantages. Firstly, it has allowed us to capture some of the range of emotional experiences related to CSR in the case of the TKCSA. This has been crucial to understanding, and providing an accurate picture of, the emotional experience of this environmental conflict more generally. Secondly, an intricate understanding of the ways that different types of violence are experienced, can allow us, not just to document the emotions of others, but rather to edge closer to *feeling with* the people impacted by the ways that environmental conflict plays out. As Unni Wikan put it, this is to lean into a kind of "thinking-feeling", where knowledge is also made available through feeling (1991, p. 299). This has been a profound experience for me and has motivated me throughout my PhD. I am grateful to participants in my research for sharing these feelings with me, in the many ways they did, and for allowing this kind of insight which is based not only on my judgement of the situation in Santa Cruz, but also on this kind of 'feeling with'.

Limitations and recommendations for future research

Investigating emotional impacts as they appear to travel between individuals, as they are associated with institutions, or sensed in a place, traced as they morph, or illustrated in the behaviours of groups of people, has long been a challenging endeavour. Emotions can be fluid and full of incoherence, indeterminacies and ambiguities (Anderson, 2009; Berlant, 2015; Gammerl, Hutta and Scheer, 2017). I have mentioned that this places a lot of emphasis on the interpretation of emotion, and therefore on the person doing the interpreting. I have tried to be conscious and explicit about the challenges associated with apprehending feelings. I hope that the majority of emotions I have described here have been accurately portrayed. However, the possibility remains that I may have over-interpreted or undervalued some feelings, or simply, got the wrong impression, on occasion. I am heavily implicated in my writing; the part I played in the scenes I describe has not been

omitted. This has opened up a range of vision that I think is important. However, it also has its limitations. Of course, an ethnographic study, especially one which documents fleeting emotions, and one in which the author is so heavily implicated, can never be reproduced (Behar, 1996). But would it benefit from some triangulation? I think so. There is a need for further anthropological investigations that pay detailed attention to emotions, at the many sites of pollution, contamination, disaster, and environmental conflict. It is only through further probing of the issue of emotion amongst people impacted by these types of environmental degradation and conflict, that we will be able to accurately understand the potential impacts on health and wellbeing of proposed extractive and industrial projects.

The scope of analysis behind this thesis has been restricted by limited access to the inner workings of the corporation itself. I tried and failed to gain more regular and substantial access to members of the TKCSA. Even my access to the company through documentation was, to some extent, curtailed, as access to online documents about the TKCSA, produced by ThyssenKrupp, were removed from the Internet, upon the steel mill's sale in 2017 to Ternium. This means that I have been unable to provide a representative picture of any company policies or working cultures of the TKCSA. It would be interesting to see research focusing on (now) Ternium's process of constructing CSR policy, to better understand the differences between the logics behind company thinking and the logics of opposition to the factory. Some anthropological study of corporate environmental departments has been undertaken (see for example da Costa and Oliveira's ethnographic investigation of an electric energy producer involved in the development of the Belo Monte Dam in Brazil (2020). However, further long-term ethnographic study would contribute to our understandings of the social conventions of corporate environmental analysis. Similarly, this thesis has necessarily neglected the ways that decisions regarding the TKCSA were made at the level of local, state, and federal government. There have been some investigations of the involvement of these institutions in the implantation of large-scale industrial, and infrastructural projects in Brazil (Santana, Guedes and Villela, 2011; Verdum, 2013), particularly

in relation to Environmental Impact Assessments (Zhouri, 2008; Duarte, Dibo and Sánchez, 2017) and looking at the relationships between State actors and social movements (Cardoso, 2017). However, ethnographic study analysing organisational cultures within State institutions, such as the National Bank for Economic and Social Development (BNDES) and the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA), would benefit the study of the environment / development nexus in Brazil.

It is also important to note that while, in this thesis, the focus has been on ambient air pollution, there have been, and are, many other environmental impacts of the TKCSA / Ternium, that residents of Santa Cruz are still attempting to highlight. I have covered many of these in Chapter 7. However, a very different thesis could have been written on the emotional impacts more closely associated with the flooding that people living in São Fernando experienced, the declining fish populations or the degradation and removal of 'natural' spaces. I have focused on the particulate matter surrounding the steel mill because this was the issue that most often came up for the friends and neighbours I lived with. However, there is much more to explore around the different emotional responses linked to other environmental effects of the factory.

I have acknowledged in the introduction to this thesis that this research lacks sufficient investigation of the ways that the environmental conflict in Santa Cruz is shaped by, and shapes, social conceptions of race, in the area. I have mentioned the research conducted into the case of the TKCSA, which deals more comprehensively with environmental racism. These investigations document the ways that Santa Cruz can be categorised as a 'sacrificial zone' based on the socio-racial stratification of environmental injustice, in Brazil and more specifically in Rio de Janeiro (de Oliveira, de Castro and de Carvalho, 2011; Tavares, 2019; Rocha, 2022). The authors of these articles highlight the intersection of various factors including, the historical development of Santa Cruz as a place where the city's 'dirty work' was located, the marginalisation of the area through a lack of investment in infrastructure, public health, education and social assistance and the racism of

federal government, other public organs, and national and international elites in the placement of heavy industry and dangerous enterprises in the area (most notably, see, Pires and Guimarães, 2016; de Souza, 2021). My work has been informed by these issues; they are present in my discussion of localised experiences of pollution and conflict with the TKCSA (see Chapter 10, for example). However, the situation in Santa Cruz could be further understood with the aid of anthropological investigations that focused more on local peoples' understandings of these issues and the ways that they play into political activism and resistance to industry in the area.

My research is, as all ethnographic endeavours are, quite definitely situated in a specific time (see for example Fabian's critique of the 'ethnographic present', 1983). This is, perhaps, all the more apparent because of the amount of time I have taken to write up this thesis, having had periods of maternity leave while undertaking this PhD. More than seven years have passed since I completed my fieldwork in Santa Cruz. This has given me time to reflect on what happened in the fifteen months I was there, and it has provided the time for my writing to mature, through the process of working on this thesis. However, a lot has occurred in this time, which my thesis has not been able to capture. While I have remained in contact with friends in the João XXIII region of Santa Cruz, and been able to consult with them since I left Brazil, this analysis may have benefitted from repeated visits to Santa Cruz, to follow the issue as it has developed beyond 2016.

Conclusion: Material emotion

The strict separation often imposed between material realities and less tangible elements of life has long been written against (Haraway, 2000; Miller, 2005; Gane, 2006). More recently Anthropocene literature has shown us the entanglement of the immaterial; exploring temporalities and their consequences, seeing the ways history becomes tangible in landscapes, understanding how the extinct can leave traces in the living, and identifying the hope of collaboration (Gan *et al.*, 2017; Tsing, Mathews and Bubandt, 2019; Mathews, 2020). If we are to take seriously the messy, and inextricable, entanglements of what we might think of as the

'material' and 'immaterial' elements of life, we must end up moving beyond these categories. Donna Haraway has described the "oxymoronic quality of physicality", in that it is "the result of a permanent co-existence of stories embedded in physical semiotic fleshy bloody existence" (Haraway, 2000, p. 107). If what we experience as 'material reality' is already formed with and through the stories we tell ourselves, then we cannot adequately describe our world without insisting on the joins between materiality and meaning, without exploring the implosion of things we perceive to be distinct, and without following how those things shift and morph through time (Haraway, 2000). Our understanding of the importance of emotion, in the context of a permanently contaminated world (Liboiron, Tironi and Calvillo, 2018), is a reflection of the gradual erosion of that separation.

Similarly, we have moved beyond many of the questions surrounding the study of emotion. We have learned, for example, from feminist critiques of the devaluation of emotion, to dismiss the idea that 'real' scholarship must be about 'rational' truths, and by implication must neglect feelings (Schmitz and Ahmed, 2014; Sultana, 2015). There have been numerous theorisations of the ways that emotions are themselves things that happen (Stewart, 2007) that contribute to the creation of lived worlds (Berlant, 1998; Ahmed, 2004). However, until relatively recently, these advances in our understanding of emotion seem to have been somewhat left behind in many studies of environmental conflict, contaminated communities and living with toxicity. It is in this vein that I have taken seriously, and tried to unpick, the ways that the complexities of emotional worlds can impact upon, and interact with, the messy, material effects of living with a large-scale industrial project, industrial pollution and a powerful corporation. It is important to recognise the myriad ways that emotions are intertwined with, and inseparable from, what we might think of as more material realities (González-Hidalgo and Zografos, 2020). However, I hope this work has also gone a step further than this, to understand feelings, not merely as elements intertwined with the health impacts of ambient air pollution and environmental conflict, but also as crucial components in the very ways that a polluted lived world and conflictual relations unfolded around ThyssenKrupp's Companhia Siderúrgica do Atlântico.

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